ZSTIC-Biotech/ChemLib

92655

From: Sent: To: Subj ct:

Mehta, Ashwin Monday, April 28, 2003 4:11 PM STIC-Biotech/ChemLib sequence search

STIC,

Please search the commercial and interference databases for the following from 09/845,849:

1) the nucleotide sequence of SEQ ID NO: 1

2) the nucleotide sequence of SEQ ID NO: 3

My mail room is 9E12, office 9E07, art unit 1638.

Thank you, Ashwin

Ashwin Mehta United States Patent and Trademark Office Biotechnology Patent Examiner 703-306-4540 Riv

Point of Contact: Toby Port Technical Info. Specialist CM1 6A04 703-308-3534

Searcher:
Phone:
Location:
Date Picked Up: 4729
Date Completed: 156
Searcher Prep/Review:
Clerical:
Online time:

TYPE OF SEARCH:
NA Sequences:
AA Sequences:
Structures:
Bibliographic:
Litigation:
Full text:
Patent Family:
Other:

VENDOR/COST (where applic.)
STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

•

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-845-849-1
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                May 1, 2003, 15:58:02; Search time 2798 Seconds (without alignments) 8903.503 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2054640 segs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.5 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb_ba:*
gb_htg:*
                                                                                                                                                                                                                                                                                                                                                                                                                                      gb_p1:*
                                       em_htg_mus:*
em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
em_htg_vrt:*
em_sy:*
                                                                                                                                                                                                                                           em_mu:*
em_om:*
em_or:*
em_ov:*
em_pat:*
                                                                                                                                                                                                                                                                                                                               em_fun:*
em_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                           gb_ro:*
gb_sts:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gb_pat:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_om:
                                                                                                                                                                                                                                                                                                                                                        gb_vi:*
em_ba:*
                                                                                                                                                                                                                                                                                                                                                                                gb_sy:*
                                                                                                                                    em_htg_hum:*
em_htg_inv:*
                                                                                                                                                                                          em_sts:*
                                                                                                                                                                                                       em_ro:*
                                                                                                                                                                                                                                                                                                                  em_in:*
em_htgo_other:*
              em_htgo_hum:*
em_htgo_mus:*
                                                                                                                        em_htg_other:*
                                                                                                                                                                             em_un:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4109280
```

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

SOURCE U ORGANISM U REFERENCE 1 AUTHORS W TITLE III JOURNAL P	N C		5 6 35. 6 6 35. 7 6 35. 8 9 46. 9 9 46. 10 389. 11 374. 12 374. 13 248. 14 248. 15 248. 16 24. 17 239. 18 238. 19 230. 20 225. 21 220. 21 220. 22 19 230. 23 185. 24 185. 25 176. 26 171. 27 171. 28 174. 29 171. 30 168. 31 168. 31 168. 33 166. 43 159. 39 157. 40 157. 41 154. 42 154. 43 146. 44 145.	842. 799.	Result No. Scor
Unknown. Unknown. Unclassifi 1 (bases Weigel,D. Flowering modulated Patent: US	AR148907 Sequence 3 AR148907 AR148907.1		5 8 8 8 6 5 4 6 6 6 6 7 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	100. 98. 93.	% Query e Match
ed. 1 to 85 and Kan locus 7 flower 622555	from		840 528 528 109560 2483 799 847 847 1004 847 1078 847 1078 847 1078 848 668 836 668 836 668 836 954 492 492 954 197568 1975	655	Length DB
56) dailsky,I cdry) and genetically development do-A 3 01-MAY-2001;	856 bp DNA patent US 6225530. 5112997	ALIGNMENTS	では、 では、 では、 では、 では、 では、 では、 では、	AR1489 AR1489 AR1489	B ID
modified plants having	linear PAT 08-AUG-2001		9065378 Arabidop 9138913 Arabidop 9138913 Arabidop 9138913 Arabidop 913996 Method for 9152996 Arabidop 9152997 Arabidop 9152997 Arabidop 9152997 Arabidop 9152997 Arabidop 9152994 Oryza sa 80622443 Oryza sa 80622443 Oryza sa 80727897 Sequence 80727897 Sequence 807278 Arabidop 807278 Sequence 807278 Sequ	AR148907 Sequence AR148906 Sequence AB027504 Arabidops	ption

```
밁
            δ
                              В
                                          Ş
                                                            В
                                                                       δÃ
                                                                                         밁
                                                                                                       ş
                                                                                                                      В
                                                                                                                                  Ş
                                                                                                                                                     밁
                                                                                                                                                                  Š
                                                                                                                                                                                 멍
                                                                                                                                                                                               Š
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match
Best Local Similarity
Matches 856; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                 481
                                                             136
                                                                                          196
                                                                                                         661
                                                                                                                                     601
                                                                                                                                                     316
                                                                                                                                                                    541
                                                                                                                                                                                   376
                                                                                                                                                                                                                436
                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                             496
                                             781
                                                                          721
                                                                                                                       256
                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                           556
                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                     736
                                                                                                                                                                                                                                                                                                                                                                                                                              856
                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                796
 16
                              76
                                                                                                                                                                                                                                                                                                                                                                                                              61
AAAAAAAAAACTCGAG 856
                                                                                                                                                                                AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG 540
                             TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA 720
                                                                                                                              CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA 660
                                                                                                                                                  TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG 780
                                                                                                                                                                                                              CCTTTGGCAATGAGATTGTGTGTTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                 CTCACCTCCGAGAATATCTCCCATTGGTTGGTGACTGATATCCCCTGCTACAACTGGAACAA 360
                                                                                                                                                                                                                                                                                                                                                                ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                                                                                                                                                                              AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                             TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                      CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                                         CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  249
                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="unknown"
194 c 150 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .856
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 856; DB 6; 1
Pred. No. 7.1e-192;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                      197
                                                                                                                                                   257
                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                               377
                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                          497
                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                    617
                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                             797
                                                                                                                                                                                                                                                                                                      557
                                                                                                                                                                                                                                                                                                                                                                  677
                                                                                                                                                                                                                                                                                                                                                                                               737
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

RESULT 2 AR148906

	PERENCE AUTHORS TITLE TAUTHORS TITLE SOURCE
	יי אול ביי איי איי סייט אייא טייט איין איי איי איי איי איי איי איי איי אי
JOURNAL ATURES SATURES SOURC SE COUNT IGIN Ouery Ma Best Loc Matches 1 1 1 1 1 1 1 1 1 1 2 4 1 3 0 3 0 3 6 4 4 2 4 2 1	FERENCE AUTHORS TITLE TOURNAL SE COUNT IGIN OUERY MATCHES 61 121 121 181 181 181 181 241 301 361 361 421
JOURNAL ATURES SOURC SE COUNT IIGIN Query Ma Best Loc Matches 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PERENCE AUTHORS TITLE TOTAL SE COUNT IIGIN MATCHES SOUIC SE COUNT IIGIN 1 61 61 121 121 181 181 181 181 181 181 301 301 361
OURNAL TURES SOUTC E COUNT GIN uery Ma est Loc atches 1 1 1 121 121 121 181 181 181 181 241 301	ERENCE UTTHORS TURES SOURCE COUNTINGS SOURCE COUNT GIN 1 1 121 121 121 121 121 121 131 131 131
OURNAL TURES SOUTC E COUNT GIN 1 1 1 11 121 121 181 181 181	ERENCE UTTHORS ITLE OURNAL TURES SOURCE COUNT GIN E COUNT GIN 1 1 1 111 121 121 181 181 181
OURNAL TURES SOUTC E COUNT GIN 1 1 61 61 121 121 181	ERENCE UTTHE TITLE TOURNS TURES SOUTC E COUNT GIN 1 121 121 181 181
OURNAL TURES SOUIC E COUNT GIN uery Ma est Loc atches 1 1 61 61 121	ERENCE UTTHORY TO THE STATE OF THE SOUTH OF SOUT
OURNAL TURES SOUTCE E COUNT GIN uery Matc est Local atches 8 1 TC 1 TC 1 T T T T T T T T T T T T T T T T T T T	ERENCE UTHORS ITLE OUTHORS TURES SOUTCE E COUNT GIN atches '8 atches '8 1 TC 1 TC 61 AG 61 AG
TURES SOURCE E COUNT GIN atches 1 TCTAG 1 TCTAG	RIGANISM UNR RIGANISM UNR ERRNCE 1 UTHORS Wei UTHORS Mod OURNAL PAT TURES SOUTCE E COUNT GIN E COUNT GIN 1 TCTAG 1 1 TCTAG
TURES TURES SOURCE E COUNT E COUNT E COUNT FOR A COUNT OF A COUNT	ERENCE 1 (base UTHORS Weigel, ITLE Floweris modulate Patent: TURES SOURCE E COUNT 263 GIN 263
modulate OURNAL Patent: TURES source COUNT 263	COUNT 263
modulate JOURNAL Patent: EATURES Source	OKGANISM UNKNOWN UNCLASS; EFFERENCE 1 (base AUTHORS Weigel, TITLE Floweria TOURLS EATURES SOURCE
	Unclass FERENCE 1 (base AUTHORS Weigel, I TITLE Floweri

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
AB027504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL MEDLINE
  Query Match
Best Local Similarity
Matches 802; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                       CDS
                                                                                           polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Araki, T. and Kobayashi, y.

Direct Submission

Submitted (19-MAY-1999) Takashi Araki, Grad. School of Science, Kyoto University, Department of Botany, Division of Biological Sciences; Sakyo-ku, Kyoto, Kyoto 606-8502, Japan (E-mail:taraquiegr.bot.kyoto-u.ac.jp, Tel:81-75-753-4136, Fax:81-75-753-4141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kobayashi,Y., Kaya,H., Goto,K., Iwab
A pair of related genes with antagon
flowering signals
Science 286 (5446), 1960-1962 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arabidopsis thaliana (strain:Landsberg Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AB027504
AB027504.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20050958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AB027504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 864)
 93.4%;
ilarity 99.5%;
Conservative
                                                                                                  /protein_id="BAA77838.1"
/db_xref="GI:4903012"
/translation="MSINIRDLIVSRVVGDVLDFENRSITLKVTYGQREVTNGLDLR
PSQVQNKPREZIGGEDKREYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG
NEIVCYENPSPTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAV
FYNCQRESGCGGRRL"
                                                                /gene="FT"
149 c
                                                                                           671. .675
                                                                                                                                                                                                                                      similar
                                                                                                                                                                                                                                                                                                     /gene="FT"
70. .597
                                                                                                                                                                                                                          protein (PEBP) and
                                                                                                                                                                                                                                                                                                                                                                                             /strain="Landsberg er
/db_xref="taxon:3702"
/chromosome="1"
                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Arabidopsis
/strain="Landsberg_er"
                                                                                                                                                                                                          neurostimulating peptide
                                                                                                                                                                                                                                                    flowering
                                                                                                                                                                                                                                                              /standard_name="FLOWERING LOCUS
/note="induces flowering; loss-c
                                                                                                                                                                                   /product="FT"
                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                        /gene="FT"
                                                                                                                                                                                                                                                                                                                                          /note="Corresponds to nucleotides 10511-10780,
11596-11657, 12371-12411, and 12536-13005 of i
(Accession Number AC001229)"
                                                                                                                                                                                                                                                                                                                                                                                 /map="90 cM on F5I14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:4903011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         855
                                                                                                                                                                                                                       to mammalian phophatidylethanolamine (PEBP) and hippocampal cholinergic
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŦŢ
 Score 799.6; DB 8;
Pred. No. 1.5e-178;
); Mismatches 4;
                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          864 bp
(FLOWERING
                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antagonistic
                                                                                                                                                                                                                                                                                                                                                                                                                                   thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Iwabuchi, M.
                                                                                                                                                                                                           (HCNP) precursor"
                                                                                                                                                                                                                                                             LOCUS T"
loss-of-function mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          er)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M. and
roles
 Indels
                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Araki,T
                          864;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complete
                                                                                                                                                                                                                                                                                                                                                      of F5I14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mediating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLN
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-FEB-2000
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           779
                                                                                                                                                                                                                                                              delays
0
REFERENCE
AUTHORS
                                                                                                                                                                    RESULT 4
AY065378
                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                            SOURCE
                                                                                                                                                           Locus
                                                                ORGANISM
```

```
825
                                                                                                                                                                    652
                                                                                                                                                                                                                          592
                                                                                                                                                                                                                                                                                532
                                                                                                                                                                                                                                                                                                          525
                                                                                                                                                                                                                                                                                                                                     472
                                                                                                                                                                                                                                                                                                                                                                                           412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105
 832
                                                       772
                                                                                                             712
                                                                                                                                        705
                                                                                                                                                                                             645
                                                                                                                                                                                                                                                     585
                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                       405
                                                                                                                                                                                                                                                                                                                                                                                                                                                   352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          45
                                                                                                                                                                 GTTGGAGACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAA 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTTGTTCAAGATCAAAGATGTCTATAAATATAAAGAGACCCTCTTATAGTAAGCAGAGTT
                                                                    TTTTACTTATATAGTGTGTGAGATGCGATAATTATATTAATCTACATGAAATGAAGTGTTAT
                                                                                                                          CTATAGTAGTTCAATATATAAAGTGTGTAATAAAAATGAGAGGGGGAGAAAATGAGAGTG
                                                                                                                                                                                                                                                                                             CTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCCGGAGGAAGAAGA 584
                                                                                                                                                                                                                                                                                                                                                                GCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTGTTTACGAAAATCCAAGTCCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTTGTTCAAGATCAAAGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTT 111
                          ATTTATAAAAAAAAAAAAAAAAAAAA 850
                                                       TTTTACTTATATAGTGTGTGATGCGATAATTATATTAATCTACATGAAATGAAGTGTTAT
                                                                                                             CTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGAGAGTGGCTGCGGAGGAAGAAGA
                                                                                                                                                                                                                                                                                                                                     GCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                           GCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTTTACGAAAATCCAAGTCCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTGGAGACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAA
 ATTTATACTTTAAAAAAAAAAAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              224
                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          171
                                                       831
                                                                                  824
                                                                                                             771
                                                                                                                                                                  711
                                                                                                                                                                                             704
                                                                                                                                                                                                                        651
                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                 591
                                                                                                                                                                                                                                                                                                                                     531
                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                           47.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                   411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104
                                                                                                                                       764
```

ACCESSION VERSION KEYWORDS DEFINITION

Arabidopsis thaliana FT (At1g65480) mRNA, AY065378 AY065378 840 bp mRNA putative flowering complete cds. signals linear mediating PLN 26-APR-2002 protein

AY065378.1 FLI_CDNA.

Arabidopsis thaliana. Arabidopsis thaliana Arabidopsis thaliana Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis. (bases 1 to 840) ada, K., Liu, S.X., Sakano, H., Pham, P.K., Banh, J., Chung, M.K.,

```
BASE COUNT
ORIGIN
                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                   Query Match
Best Local S
Matches 767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                           $
                        GTTTGTTCAAGATCAAAGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTT 104
                                                                     767; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The Salk, Stanford, PGEC (SSP) Consortium members carried out the sequencing and annotation of the RAFL CDNAS: Yamada, K., Banh, J., Chang, C.H., Chang, E., Dale, J.M., Goldsmith, A.D., Lee, J.M., Ondera, C.S., Quach, H.L., Tang, C.C., Toriumi, M., Wu, H.C., Onodera, Y., Yu, G., Yu, S., Bowser, L., Chen, H., Cheuk, R., Jones, T., Yamamura, Y., Yu, G., Yu, S., Bowser, L., Chen, H., Cheuk, R., Jones, T., Karlin-Neumann, G., Kim, C., Lam, B., Lin, J., Meyers, M.C., Miranda, M., Nguyen, M., Palm, C.J., Shinn, P., Southwick, A., Davis, R.W., Ecker, J.R. and Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 840)

2 (bases 1 to 840)

Yamada, K., Banh, J., Chang, C.H., Chang, E., Dale, J.M.,

Goldsmith, A.D., Lee, J.M., Onodera, C.S., Quach, H.L., Tang, C.C.,

Goldsmith, Wu, H.C., Yamamura, Y., Yu, G., Yu, S., Bowser, L.,

Toriumi, M., Wu, H.C., Yamamura, Y., Yu, G., Yu, S., Bowser, L.,

Carninci, P., Chen, H., Cheuk, R., Hayashizaki, Y., Ishida, J.,

Jones, T., Kaniya, A., Karlin-Neumann, G., Kawati, Kim, C., Lam, B.,

Jones, T., Kaniya, A., Karlin-Neumann, G., Kawati, Xim, C., Lam, B.,

Lin, J., Meyers, M.C., Miranda, M., Narusaka, M., Juyen, M., Palm, C.J.,

Sakurai, T., Satou, M., Seki, M., Shinn, P., Southwick, A.,

Shinozaki, K., Davis, R.W., Ecker, J.R. and Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (04-DEC-2001) Plant Gene Expression Center, 800 Buchanan Street, Albany, CA 94/710, USA RIKEN Genomic Sciences Center (GSC) members carried out the collection and clustering of RAFL cDNAs (RAFL cDNA: 'RIKEN Arabidopsis Full-Length cDNA'): Seki.M., Narusaka,M., Ishida,J., Satou,M., Kamiya,A., Sakural,T., Carninci,P., Kawai,J., Hayashizaki,Y. and Shinozaki,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goldsmith, A.D., Lee, J.M., Quach, H.L., Toriumi, M., Yu, G., Bowser, L. Carninci, P., Chen, H., Cheuk, R., Hayashizaki, Y., Ishida, J., Jones, T., Kamiya, A., Karlin-Neumann, G., Kawai, J., Kim, C., Lam, B., Lin, J., Miranda, M., Narusaka, M., Nguyen, M., Palm, C.J., Sakurai, T. Satou, M., Seki, M., Shinn, P., Southwick, A., Shinozaki, K., Davis, R.W., Ecker, J.R. and Theologis, A. Arabidopsis Full Length cDNA Clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yamadà,K. (SSP/PGEC) and Seki,M. (RIKEN GSC) contributed equally this work. Shinozaki,K. (RIKEN GSC) and Theologis,A. (SSP/PGEC) contributed equally to this work as PIs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                         FYNCL...
611. .840
/gene="Atlg65480"
/8 c 182 c
                                                                                                                                                                                                                                          /product="putative flowering signals mediating protein FT"
/protein_id="AAL38819.1"
/protein_id="AAL38819.1"
/db_xref=="GC1:17529186"
/translation="MSINIRDPLIVSRVVGDVLDFFNRSITLKVTYGQREVTNGLDLR
/translation="MSINIRDPLIVSRVVGDVLDFFNRSITLKVTYGQREVTNGLDLR
/SQVQNNFPVEGGEDLRNYFYTLVMVDDDVPSPSNPHLREYLHMLVTDLTATTGTTFG
NEIVCYENPSPTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAV
FYNCQRESGCGGRRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene=
83..6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="RAFL06-80-B19 (R11796)"
/note="This clone is in a modified pBluescript vector
(Lambda ZAP) as a Xhoi/SstI insert.
ecotype: Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Arabidopsis
/db_xref="taxon:3702"
/chromosome="1"
                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                       /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="At1g65480"
                                                                                     89.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "At1g65480"
                                                                   0
                                                                 Score 763.4; DB 8;
Pred. No. 5.4e-170;
0; Mismatches 6;
                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thaliana"
                                                                 Indels
                                                                                                            Length
                                                                 0;
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bowser, L.,
JOURNAL
MEDLINE
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
AB027505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTATAGTAGTTCAATATATAAGTGTGTAATAAAAATGAGAGGGGGGAGGAAAATGAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGAGAGTGGCTGCGGAGGAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCACCAGGGTGGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTTGTTCAAGATCAAAGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTAGATGGCTTCTTCCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana (strain:Landsberg er) cDNA to mRNA.
Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
  Araki,T. and Kobayashi,
Direct Submission
                                                                                     flowering signals
Science 286 (5446)
                                                                                                                                                                                                                                                                                                                                                                                            Arabidopsis thaliana FT
                                                                                                                                                      Kobayashi,Y., Kaya,H.,
                                                                                                                                                                                                                      Spermatophyta; Magnoliophyta; eudicotyledons;
                                                                                                                                                                                                                                                                                                                               AB027505.1
                                                                                                                                                                                                                                                                                                                                                                          spliced variant.
                                                                 20050958
                                                                                                                                                                                                    Rosidae; eurosids II;
                                                                                                                                pair of related
                                             (bases 1 to 780)
                                                                                                                                                                             (sites)
                                                                                                                              genes
                                                                                                                                                                                                    Brassicales; Brassicaceae;
                                                                                                                              Goto,K., Twabuchi,M. and Araki,T. s with antagonistic roles in media
                                                                                                                                                                                                                                                                                                                                                                                               (FLOWERING
                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                 T)
```

584

524 484 464 424 404

544

344

364

284

304

184

224 244

704 664 644 604

linear) mRNA,

PLN 26-FEB-2000 complete cds,

core eudicots

```
Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE CO
 밁
                      δ
                                                      В
                                                                             Š
                                                                                                                 밁
                                                                                                                                     Qy
                                                                                                                                                                      В
                                                                                                                                                                                               δ.
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                            , Q
                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                               •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
   455
                                                                                                                                                                                                                                                                                                                                                     172
                                                                                                                                                                                                                                                                                                                                                                              165 AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                             112
                                                                                                                                                                                                                                                                                                                                                                                                                          105 GTTGGAGACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAA 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Sin
hes 725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGA 584
                                                                                                                                                                                     GCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACT 404
                                                                                                                                                                                                                                GAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTT
                                                                                                                                                                                                                                                                                                       GAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTTGGTTATIGGTGGATCCAGATGTT
                                                                                                                                                                                                                                                                                                                                                  AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAAACAAGCCAAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                           GTTGGAGACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (19-MAY-1999) Takashi Araki, Grad. School of Science, Kyoto University, Department of Botany, Division of Biological Sciences; Sakyo-ku, Kyoto, Kyoto 606-8502, Japan (E-mail:taraqui@gr.bot.kyoto-u.ac.jp, Tel:81-75-753-4136, Fax:81-75-753-4141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 90.(
25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WQANSVCTRVAPELQHSRVC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="BAA77839.1"
/protein_id="BAA77839.1"
/db_xref="GI:4903014"
/translation="MSINIEDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
/translation="MSINIEDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
PSQVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    first 77 bases of the fourth exon of FT alternative splice acceptor site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Columbi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                detected in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /standard_name="FLOWERING LOCUS T"
/note="amino acid residues 1-101 of hypothetical
translation product are identical to those of FT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"Corresponds to nucleotides 10511-10780, 11596-11657, 12371-12411, and 12536-13005 of E (Accession Number AC001229)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Arabidopsis
/strain="Landsberg er"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70. .438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               two ecotypes examined,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 635.6; DB 8;
Pred. No. 8.7e-140;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Landsberg er and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  are lacking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of F5114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of FT protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                           464
                                                                                                                                                                                                                                                                                                                                                                                224
                                                      454
                                                                                    524
                                                                                                                                                                                                                                                           344
                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                          291
                                                                                                                                                                                                                                                                                                                                                  231
                                                                                                                 394
                                                                                                                                                                        372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۲.
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AY133813
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          755 ATTTATACTTTAAAAAAAAAAAAAAA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTATAGTAGTTCAATATATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTATAGTAGTTCAATATATAAGTGTGTAATAAAAATGAGAGGGGGGAGGAAAATGAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTAGATGGCTTCTTCCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTAGATGGCTTCTTCATTATAACCAATTGATATTGCATACTCTGATGAGATTTATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTTATAAAAAAAAAAAAAAAAAAA 850
                                                                                                                                                                                                     2 (bases 1 to 559)
Yamada,K., Chan,M.M., Chang,C.H., Dale,J.M., Deng,J.M., Hsuan,V. Yamada,K., Quach,H.L., Tang,C.C., Toriumi,M., Wallender,E.K., Wong,C., Wu,H.C., Yu,G., Yuan,S., Bowser,L., Carninci,P., Chen,H. Cheuk,R., Hayashizaki,Y., Ishida,J., Jones,T., Kamiya,A., Cheuk,R., Hayashizaki,Y., Ishida,J., Jones,T., Kamiya,A., Karlin-Neumann,G., Kawai,J., Kim,C., Lam,B., Lin,J., Miranda,M., Narusaka,M., Ngyen,M., Palm,C.J., Sakurai,T., Satou,M., Seki,M. Shinn,P., Southwick,A., Shinozaki,K., Davis,R.W., Ecker,J.R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AY133813
AY133813.1
                                                                                                                                                                                                                                                                                                                                                                                                            Lee, J.M., Quach, H.L., Tang, C., Toriumi, M., Wallender, E.K., Wong, C., Wu, H.C., Yu, G., Yuan, S., Bowser, L., Carninci, P., Chen, H., Cheuk, R., Hayashizaki, Y., Ishida, J., Jones, T., Kamiya, A., Karlin Neumann, G., Kawai, J., Kim, C., Lin, J., Miranda, M., Narusaka, M., Nguyen, M., Palm, C.J., Sakurai, T., Satou, M., Seki, M., Shinn, P., Southwick, A., Shinozaki, K., Davis, R.W., Ecker, J.R. and Theologis, A. Arabidopsis Open Reading Frame (ORF) Clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana madiating protein FT
The RIKEN Genomic Sciences Center (GSC) members carried out the collection and clustering of RAFL CDNAS (RAFL CDNA: 'RIKEN Arabidopsis Full-Length CDNA'): Seki,M., Narusaka,M., Ishida. Satou,M., Kamiya,A., Sakurai,T., Carninci,P., Kawai, J., Hayashizaki,Y. and Shinozaki,K.
                                                                                                               Submitted (17-JUL-2002) Plant Gene Expression Center, Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yamada, K., Chan, M.M., Chang, C.H., Dale, J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AY133813
                                                                                                                                                                                    Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 559)
                                                                                                                                                               Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:22136805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        559 bp mRNA linea clone U11796 putative flowe (At1g65480) mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear P
                                                                                                                                                                                                                                                                                             Deng, J.M., Hsuan, V.W., Wallender, E.K., Carninci, P., Chen, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Deng, J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g,J.M., Hsuan,V.W., nder,E.K., Wong,C., Chen,H., Cheuk,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLN 07-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  signals
                                                                                                                                       800 Buchanan
                                          Ishida, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                574
```

The Salk, Stanford, PGEC (SSP) Consortium members constructed and sequenced the pUNI (ORF) clones using the RAFL CDNAS: Yamada.K., Chan, M.M., Chang,C.H., Dale,J.M., Deng,J.M., Hsuan,V.W., Lee,J.M., Quach,H.L., Tang,C.C., Toriumi,M., Wallender,E.K., Wong,C., Wu,H.C., Yu,G., Yuan,S., Bowser,L., Chen,H., Cheuk,R., Jones,T., Karlin-Neumann,G., Kim,C., Lam,B., Lin,J., Miranda,M., Nguyen,M., Palm,C.J., Shinn,P., Southwick,A., Davis,R.W., Ecker,J.R. and Theologis,A.

Yamada, K. (SSP/PGEC) and Seki, M. (RIKEN GSC) contributed equally

```
밁
                      δ
                                        멍
                                                         Q
                                                                                밁
                                                                                           Š
                                                                                                                В
                                                                                                                               Ş
                                                                                                                                                   В
                                                                                                                                                                 δõ
                                                                                                                                                                                       Вþ
                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                           603
                                            481
                                                              543
                                                                                421
                                                                                                 483
                                                                                                                   361
                                                                                                                                    423
                                                                                                                                                     301
                                                                                                                                                                                        241
                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                             243
                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                      363
                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                     AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT
                                                                                                                GTGTTTATATTTCGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG
                                                                                                                                                   TTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTC
                                                                                                                                                                                                                        CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                                                                                                                                                                           ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT
                  TTTATAACCAATTGATATT
         TTTATAACCAATTGATATT
                                                             TTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCC
                                                                                                                                                                                                                                                                                               TTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCC
                                                                                                                                                                                                                                                                                                                                                                       559;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to thi
                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        this
                                                                                                                                                                                                                                                                                                                                                                                                                 151
                                                                                                                                                                                                                                                                                                                                                                    65.3%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s work. Shinozaki,K. (RIKEN GSC) and Theologis,A.
contributed equally to this work as PIs.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                       /evidence-experimental / product="putative flowering signals mediating protein FT" / protein_id="Aum31747.1" / protein_id="Aum31747.1" / protein_id="Aum31747.1" / protein_id="Aum31747.1" / protein_id="Aum31806" / translation="MSINIRDFLIVSRVVGDVLDPFNRSITLKVTVGGREVTNGLDLR PSQVQNK PRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG NEIVCYENPSPTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLFVAAV FYNCQRESGCGGRRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="This clone is
ecotype: Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Arabidopsis
/db_xref="taxon:3702"
/chromosome="1"
/clone="U11796"
                                                                                                                                                                                                                                                                                                                                                                                                                /gene="At1g65480"
117 c 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="At1g65480"
                          621
          559
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                           Score 559; DB 8; L
Pred. No. 1.1e-121;
                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
                                                                                                                                                                                                                                                                                                                                                                                                                 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51.
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                     Length 559;
                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SSP
                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                  482
                                                                                                                                                                      422
                                           540
                                                                               480
                                                                                                                 420
                                                                                                                                                    360
                                                                                                                                                                                        300
                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
E38985
LOCUS
DEFINITION
ACCESSION
              Š
                                                 δÃ
                                                                    밁
                                                                                   Qy
                                                                                                       밁
                                                                                                                        δÃ
                                                                                                                                          밁
                                                                                                                                                         ρ
                                                                                                                                                                              В
                                                                                                                                                                                             Q
                                                                                                                                                                                                                 В
                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                   В
                            밁
                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                            source
421
                483
                                  361
                                                    423
                                                                     301
                                                                                       363
                                                                                                        241
                                                                                                                         303
                                                                                                                                           181
                                                                                                                                                            243
                                                                                                                                                                              121
                                                                                                                                                                                               183
                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                   سر
```

```
AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT
                                                                                                                              CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT
                                                                                  GTGTTTATATTTCGTTTCGACAGCCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCCAG
                                                                                                                                                                                                 CACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACC
                                                                                                                                                                                                                  CACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACC
                                                                                                                                                                                                                                                                                                                              CCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGC
                                                                   GTGTTTATATTTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG
                                                                                                                                                                                                                                                                                                                                                            TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E38985
Method for shorten1
E38985.1 GI:186250
JP 2000139250-A/1.
Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PI TAKASHI ARAKI,KYOJI KOBAYASHI,KENICHI OGAWA,MAKOTO SHIRAI PC A01H1/00,A01H5/00,C12N5/10,C12N15/09//(C12N5/10,C12R1:91), PC (C12N15/09,C12R1:91), C12N15/00,C12N15/00,C12N15/00,C12R1:91), PC (C12N15/00,C12R1:91)
CC
CC
FH Key Location/Qualifiers
FT source /organism='Arabidopsis'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Araki, T., Kobayashi, K., Ogawa, K. and Shirai, M. Method for shortening plant generation and plant Patent: JP 2000139250-A 1 23-MAY-2000;
TORAY IND INC
OS Arabidopsis
PN JP 2000139250-A/1
PD 23-MAY-2000
PF 11-NOV-1998 JP 1998320219
PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eurosidae; eurosida II; Brassicales; Brassicaceae.

1 (bases 1 to 528)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis
Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for shortening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <sub>D</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Arabidopsis"
/db_xref="taxon:3701"
111 c 129 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:18625004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 528; DB 6; Le
Pred. No. 2.4e-114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               generation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear plant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                 482
                                 542
                                                                                                                                                                   422
                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
   480
                                                                 420
                                                                                                                                 360
                                                                                                                                                                                               300
                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                              302
                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

gene

Sg

gene

CDS

<u> XLANGKGLSRRERQQLTRTTADIFRLVPVAVFIIVPFMEFILPVFLKLFPNMLPSTFQ</u>

complement(join(42975. 43683. .43771,43856. . AAMYLKDTLGKEGIQELIQNLSKDKVFVVFRWQNTGGRLSEVSERD complement(42975. .44922) /translation="magklkpeeavQatlsslpdevvDtvgeeeeeeeeemakkkesa ssgkvyaldemastakdaneQakaktlekHeQlcelsralavlasasvwrllttlsf ilptgvlrvswaereeetklykkevDlynswrekKgfvdbeedarkaylaareDsdrs QkaIadktssalldrvetmlQklekeIdDvDnkIgnrwrlldrsvDydgkvspdeval complement(join(41498. .41562,41619. 41981. .42127,42220. .42267,42316. .4 /gene="F5114.6" SQSVLITTSDGKFFSNGYDLALAESNPSLSVVMDAKLRSLVADLISLPMPTIAAVTGH ASAAGCILAMSHDYVLMRRDRGFLYMSELDIELIVPAMFMAVIRGKIGSPAARRDVML TAAKYTADVGYKMGIVDSAYGSAAETVEAAIKLGEEIVQRGGDGHVYGKMRESLLREV /gene="F5I14.5" /translation="MGMKSPNIAAFMLPLLLILFTLSSQLKVVESTGRKLAWGFSGTP
IVYTPPSRSCGTSPAVFTSKWRRPRPCRLPPGSYIPASDQSP" 36957 /translation="mSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR PSQVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG NEIVCYENPSPTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAV VDIRSFMDNMMOKNSSEMAEKDSKREEKLLLKQLEKNRCEAEKEKKRMERQVLKEKLQ QEKEQKLLQKAIVDENNKEKEETESRKRIKKQQDESEKEQKRREKEQAELKKQLQVQK QASIMERFLKKSKDSSLTQPKLPSSEVTAQELSCTKHENEIGKVVQAIDNAFSTTCEA NKPDHDKKGEKVTSQTKEASPEECDEAVEGLSLAKAKAKAMKLEESQKSDISIMQRVR LFLLGIGPALRAIASMSREDWAKKLRHWKDEFKSTLQHYWLGTKLLWADVRISVRLLV /evidence=not_experimental /protein_id="AAB60907.1" /db_xref="GI:2190543" complement(41498. .42875) LIHTIGEYESGSSVVRSTGSKL" /evidence=not_experimental /protein_id="AAB60906.1" /db_xref="GI:2190542" complement(40241. /evidence=not_experimental
/protein_id="AAB60905.1"
/db_xref="GI:2190541" /gene="F5I14.4" join(36957. .37) ງoin(10580. .10780,11596. .11657,12371. .12411,12536. /gene="F5114.3" PSSVRGVLKLRRTCRKKIHERITAVSAMLAALQREETEKLWRSDLSKAAEKLGKILSE YLKLKEKTESYTMVAVKSAVVSVGQRVSYGVLNVDADVLEDDSESCLWCWETRDLKIM /evidence=not_experimental /protein_id="AAB60908.1" /db_xref="GI:2190544" P9642.2 (gb|U40828)." /gene="F5I14 /gene="F5I14 FYNCQRESGCGGRRL" /gene="F5I14. rvddirrydigspc" translation="MEGFYRSRLLQSPSFSNGVGILELPYPLGYRLVFQSMYSSLATA/ /gene="F5I14.7" /gene="F5I14. /gene="F5I14 /protein_id="AAB60904.1" /evidence=not_experimental /codon_start=1 /note="Similar to Arabidopsis TFL1 (gb|U77674)." 'note="Similar to Saccharomyces /codon_start=1 'note="EST gb|N37484 comes translation="MCSLEKRDRLFILKLTGDGEHRLNPTLLDSLRSTINQIRSDPSF" codon_start=1 /codon_start=1 'db_xref="GI:2190540" .37065,37294. .40963) .40963) 5. .43043,43213. .44002,44168. . .37445) from hypothetical protein this 9. .41734,41808. .42564,42795. 3. .43339,43501. .44480,44564. . gene." .42875)) .12759)

gene

CDS

gene

SdD

gene

CDS

```
t. CDS
                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                      Matches
12595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                        426
                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                            GGCAATGAGATTGTGTGTGTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTG 425
                                                                                                                                                                                                                                   466;
                                                 TTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAAC 485
                                                                                                             GGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTG 12594
                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MGEVSVVENKKVILKNYVDGIPTETDMEVKLGETIELKAPKGSS
.CFLVKNLYLSCDPYMRGRANDFHGSYLPPFVPGGRCCEVLFFVLFIGELFIFERERMC
RCCIYALERSCTPSFRCEDEWTYWLRKLEICYLLLVKLFIFFNDSLUSTDSFVLING
RIEGFGLARVIDSDDTNYKPGDIVSGIIGWEEYSLLRSSDNLQLRNIQLDDDIPLSYH
                                                                                                                                                                                                                                                                                                                                                                                      NVKIKGVLSLNSQLFHIAINRCRNIKIEDVRIIAPDESPNTDGIHIQLSTDIEVRNAS
IKTGDDCISIGPGTKNLMVDGITCGPGHGISIGSLAKSIEEQGVENVTVKNAVFVRTD
NGLRIKSWPRHSNGFVERVRFLGAIMVNVSYPILIDQNYCPGDSSCPSQESGIKINDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /translation="MALFLSFVQVFSIVITIIMSHFGQFDARTSLNVLSFGANPNGIV
ESAKAFSDAWDAACGVEDSVVIYVPKGRYLVSGEVRFEGESCKSREITLRIDGTLIGP
QDYSLLGKKENWFSFSGVHNVTVLGGSFDAKGSTLWSCKANGYNCPEGATTLRFMDSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(join(53168. .53386,53596. .54114,54461. .54916))
/gene="F5I14.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LGLLGMAGFTAYAGFNEICCPKKGDSVFVSAACGAVGQLVGQLAKLHGCYVVGSAGSK
QKVEILKNELGYDEAFNYKEEADLDTALKRYFPEGIDIYFDNVGGSMLDAALLNMKVR
GRIALCGMVSLQSLSTSSQGINNLYSAIYKRLKLEGFLQSDYLHIFPQFLENVKRYYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47929. ..48015,48122. .48218,48320. .48525,48704. .48799,4884. .48959,49053. .49153,49242. .49418,49467. .49532,49587. .49654,49750. .49870))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Strong similarity
precursor (gb|U23053)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Strong similarity to Arabidopsis
zeta-crystallin-like protein (gb|Z49268)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(50678. .52743)
/gene="F5I14.9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CSIAFSINICFIFFKKKSNSIYNAASVGLSYLQFCNLNSFNIKFILGFSFFMAISIP
QYFREYYNGGWRSDHHSNWVSTSYSIL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCFQVLICILGVWRNIVRFLSPLSIAPLATFTGLGLYHIGFPLIYNMAQTSFIFQLAR
CVEVGLPGLILLIFVTQYLPRPLKMKKGVMILDGSRCDRYGMILCIPLVWLFAQLLTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="mtnggggnngaanrteelophpvkeolpgioycvnspppwleav
VLGFQHYLLSLGITVLIPSMLETFFFFFFFFFFLNRESILIFYAEKVKVIOTLLFVSGLT
TLFQSFFGTRLDVIAVASYAYIIPITSIIYSTRETYYTDPFERFVRTMRSJOGALIIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(53168. .54916)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EGKIVYVEDISEGLDLAPAALVGLFSGKNIGKQVVRVAKE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="AAB60920.1"
/db_xref="GI:2190556"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAB60917.1"
/db_xref="GI:2190553"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MTKIGSRRVIQISAAFMIFFSIFGKFGAFFASIPLPIMASLYCIVLCFVCKSFSSHHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SGVYDHKSHTTQTSCRTDRTGLITNTPWIYIPYPFQWGSPTFDITDSFAMMAASFVTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GVGVSNDEILGFAKLFNDELTLDNINRSRLVNMCKYMGISPFGTDAYLRYMLRKRLQE
IKKDDKLIKAEGVESLSEAELRQACRERGMLQLGSVEEMREQLVDWLDLSLNHSVPSS
                                                                                                                                                                                                                                                                                                                                                          IYSGIMGTSATEIAIKMDCSEKVPCTGIRMQAINLTSYGEAAKTSCTNVSGKQLGLVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="F5I14.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="F5I14.9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FESTGLFYASARYGSATPIPPSVVSRGTCWLGVGVLLNGMLGGITGITTSTENVGLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
/protein_id="AAB60909.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'db_xref="GI:2190545"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="Similar to Zea mays permease 1 (gb|U43034)."
                                                                                                                                                                                                                                                               54.4%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lement(join(50678. .51059,51406. .51488,51567.
3. .52033,52078. .52294,52510. .52743))
                                                                                                                                                                                                                                                            Score 466; DB 8; I
Pred. No. 8.3e-100;
                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to Solanum polygalacturonase
                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                        Length 109560;
                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .51733,
                                                                                                                                                                                                                                0
```

B & B &

```
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
AF152096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              βĞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12775 ATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAATTTAA 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12715 TACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12655 TICAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTC
                                                                                                                                                              5'UTR
                                                                                                                                                                                                                             mRNA
                                                                                                                        CDS
                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              666 TAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATATATAA 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTGTAATAAAAATGAGAGGGGGAGAAAATGAGAGTGTTTTACTTATATAGTGTGTGA 785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCGATAATTATATTAATCTACATGAAATGAAGTGTTATATTTATA 13000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCGATAATTATATTAATCTACATGAAATGAAGTGTTATATTATA 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATATATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAATTTAA 665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2483 bp DNA linear PLN 22-DEC-Arabidopsis thaliana flowering locus T (FT) gene, complete cds. AF152096
                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (17-MAY-1999) Plant Biology Laboratory, The Salk Institute for Biological Studies, 10010 N. Torrey Pines Road, Jolla, CA 92037, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kardailsky, I. and Weigel, D. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Activation tagging of the floral inducer FT Science 286 (5446), 1962-1965 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Christensen, S.K., Nguyen, J.T., Chory, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kardailsky,I., Shukla,V.K., Ahn,J.H., Dagenais,N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10583961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 2483)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 2483)
/note-"similar to hippocampal cholinergic neurostimulating peptide (HCNP) precursor, phosphatidylethanolamine binding protein (PEBP) and Raf kinase inhibitor protein; corresponds to Arabidopsis thaliana BAC F5114 sequence
                                                                                                                                                                                                      join(1. .2
/gene="FT"
                                                                                        /gene="FT"
                                                                                                                                                                                                                                                                                                                /db_xref="taxon:3702"
/chromosome="I"
                                                                                                                                         /gene-"FT"
                                                                                                                                                                                 /product-"flowering
                                                                                                                                                                                                                                                                                                                                                    /organism="Arabidopsis/cultivar="Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                function="induces flowering"
                                                                                                                                                                                                                                                /gene="FT"
                                                                                                                                                                                                                                                                                       /map="90 cM;
                                                                                                                                                                                                                                                                                                            /chromosome=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:6117977
                                                                                                                                                                                                                         264,1080. .1141,1855. .1895,2020.
                                                                                                                        .1141,1855.
                                                                                                                                                                                     locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Harrison, M.J. and
                                                                                                                        .1895,2020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLN 22-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           545
                                                                                                                                                                                                                                                                                                                                                                                                                                                       La
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   666 TAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATATATAA 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2079 TITATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             426 TITATATIGTITCGACAGCTIGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAAC
                                                                                                                                                                                                                                                                                                                                                                                         TGCGATAATTATTAATCTACATGAAATGAAGTGTTATATTTAT 2483
                                                                                                                                                                                                                                                                                                                                                                                                            TGCGATAATTATATTAATCTACATGAAATGAAGTGTTATATTTAT 830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACAATTGTCAGAGGGAGGAGGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTTCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCCTTT 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCAACACTCGCGAGTTTGCTGAGAATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGTGTAATAAAAATGAGAGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTGTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTAATTTAA 665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465;
                                                                                                                                                         Arabidopsis thaliana (strain:Columbia) cDNA to mRNA. Arabidopsis thaliana Arabidopsis thaliana (strain:Columbia) cDNA to mRNA. Arabidopsis thaliana Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rossidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
Araki, T. and Kobayashi, Y.
Direct Submission
Submitted (19-MAY 1999) Takashi Araki,
                                                                            A pair of related genes with antagonistic flowering signals Science 286 (5446), 1960-1962 (1999)
                                                                  20050958
                                                                                                                               Kobayashi,Y., Kaya,H.,
                                                                                                                                                                                                                                             AB027506.1
TSF.
                                                                                                                                                                                                                                                                                            Arabidopsis thaliana TSF
                                                                                                                                                                                                                                                                                                            AB027506
                                                                                                                                                 (sites)
                                                bases 1 to 799)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="flowering locus T"
/protein_id="AAP03936.1"
/protein_id="AAP03936.1"
/db_xref="G1:6117978"
/translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
PSQVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG
NEIVCYENPSPTAGIHRVVFILFRQLGRQTVVAPGWRQNFNTREFAEIYNLGLPVAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FYNCQRESGCGGRRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     presented in GenBank Accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="FT"
                                                                                                                                                                                                                                                              GI:4903015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 465; DB b; Pred. No. 1.7e-99; Pred. No. 1.7e-99; Original Ches. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         407
                                                                                                                                Goto, K.,
                                                                                                                                                                                                                                                                                          799 bp mRNA linear (TWIN SISTER OF FT) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         923
                                                                                                                                Iwabuchi, M. and
   Grad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Number AC001229"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 2483;
                                                                                                                 roles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
 School
                                                                                                              Araki,T.
in mediating
                                                                                                                                                                                                                                                                                          PLN 26-FEB-2000 complete cds.
 0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
   Science,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                  밁
                                              Ş
                                                                              밁
                                                                                                           οy
                                                                                                                                              밁
                                                                                                                                                                        Qy
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                  498
                                                                                                                                                                             409
                                                                                                                                                                                                             318
                                                                                                                                                                                                                                             349
                                                                                                                                                                                                                                                                             258
                                                                                                                                                                                                                                                                                                                                           198
                                                                                                                                                                                                                                                                                                                                                                                                        138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49
```

Db.

δÃ 밁 Ş 밁 Š 밁 δÃ 밁 ρ 밁 δÃ

2199

546

909

2139

Matches

Ş В δÃ

밁

2439

VERSION KEYWORDS SOURCE

ORGANISM

ACCESSION DEFINITION

REFERENCE

MEDLINE JOURNAL

AUTHORS TITLE

REFERENCE

AUTHORS

TITLE

RESULT 10 AB027506 LOCUS

```
polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCAAGATCAAAGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTG 108
                CCGTGGCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTT 588
                                                                                                                                                                                    CAACTGGAACATTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAAGGTTACTTATGGCCAAAGAG 168
                                                                                                   CAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTC 528
                                                                                                                                                                                                                                             CCACTGGAAATGCCTTTGGCAATGAGGTGGTGTGCTACGAGAGTCCACGTCCCCCTCGG
                                                                                                                                                                                                                                                                                                                            GAATTCATCGTATTGTGTTGGTATTGTTCCGGCAACTCGGAAGACAAACGGTTTATGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                              TTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATCCAAGATAAATATGTCTTTAAGTCGTAGAGATCCTCTTGTGGTCGGCAGTGTTGTTG
CTGTGGCTGCCTCTTACTTCAACTGCCAGAGGGAGAATGGCTGTGGGGGAAGAAGAACGT
                                                                                                                                                                                                                                                                                                                                                                                                          TTGGAGGAGACGACTTCAGAAATTTCTACACCTTGGTTATGGTGGATCCAGATGTGCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kyoto University, Department of Botany, Division of Biological Sciences; Sakyo-ku, Kyoto, Kyoto 606-8502, Japan (E-mail:taraqui@gr.bot.kyoto-u.ac.jp, Tel:81-75-753-4136, Fax:81-75-753-4141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MSLSRRDPLYVGSVVGDVLDPFTRLVSLKVTYGHREVTNGLDLR PSQVLMKPIVEIGGDDFRNFYTLVMVDPDVPSPSNPHQREYLHWLVTDIPATTCNAFG NEVVCVESPRPBGIHRIVLVLFRQLGRQTVYAPGWRQQPNTREFAEIYNLGLPVAAS YFNCQRENGCGGRRT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /standard_name="TWIN SISTER OF FT"
/note="extensive homology with the similar to mammalian phophatidylethanolamine binding protein (PEBP) and hippocampal cholinergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="TSF"
152 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neurostimulating peptide (HCNP) precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="TSF"
32. .559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Arabidopsis
/strain="Columbia"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="BAA77840.1"
/db_xref="GI:4903016"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map="next to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            76.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 389.8; DB 8;
Pred. No. 1.1e-81;
0; Mismatches 147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSD1 locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    thaliana'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 799;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                          317
                                                                                                                                                                                                     468
                                                                              497
                                                                                                                                                               437
                                                                                                                                                                                                                                             377
                                                                                                                                                                                                                                                                                      408
                                                                                                                                                                                                                                                                                                                                                                                                          257
                                                                                                                                                                                                                                                                                                                                                                                                                                                   288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          77
```

2;

```
밁
                       Qy
                                                                                                                                                                         BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                       밁
                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
AF152907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pocas
                                                                                                                Query Match
Best Local S
Matches 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                      COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                         CDS
                            123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              589
  61
                                                                                     63
                                                        _
ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGGTTGTTGGAGACGTTCTTGAT 122
                         CCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGC 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGTCTTTAAGTCGTAGAGATCCTCTTGTGGTCGGCAGTGTTGTTGGAGATGTTCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATGCGTACCTACGTTAACTAATAATCTAATCGTATAATATTCCCCTTAATGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGATG----GCTTCTTCCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana.
Arabidopsis thaliana
Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF152907
Arabidopsis·thaliana
AF152907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (19-MAY-1999) Plant Biology Laboratory, Institute for Biological Studies, 10010 N. Torrey Jolla, CA 92037, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kardailsky,I., Shukla,V.K.,
Christensen,S.K., Nguyen,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 528)
Haaksma, S., Shukla, V.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Activation tagging of the floral inducer Science 286 (5446), 1962-1965 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Weigel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AF152907.1
                                                                                                                             Similarity
                                                                                                                                                                                        123
                                                                                                                 Conservative
                                                                                                                                                                                   /translation="MSLSRRDPLVVGSVVGDVLDPFTRLVSLKVTYGHREVTNGLDLR PSQVLLNKPIVEIGGDDFRNFYTLVMVDPDVPSFSNFHQREYLHMLVTDLPATTGNAFG NEVVCYESPRPFSGIHRIVLVLFRQLGRQTVYAPGWRQQFNTREFAEIYNLGLPVAAS YFNCQRENNGCGGRRT"

1 116 c 142 g 147 t
                                                                                                                                                                                                                                                                                                            /note-"flowering locus T (FT) homolog; similar to hippocampal cholinergic neurostimulating peptide (HCNP) precursor, phosphatidylethanolamine binding protein (PE and Raf kinase inhibitor protein"
                                                                                                                                                                                                                                                        /product="twin sister of FT"
/protein_id="AAF03937.1"
/db_xref="GI:6117980"
                                                                                                                                                                                                                                                                                                                                                                                                                                 /map-
                                                                                                                                                                                                                                                                                                                                                                       /gene="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                   /gene="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Arabidopsis/cultivar="Columbia"
                                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:3702"
/chromosome="IV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:6117979
                                                                                                                            44.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                 "between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nguyen, J.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     twin
                                                                                                                0
                                                                                                                            Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                 g3883 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ahn, J.H. and Weigel, D
                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   528 bp
n sister
                                                                                                                            377.6;
No. 8.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ahn,J.H., Dao
T., Chory,J.,
                                                                                                       ; DB b,
8.3e-79;
94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                               g13838*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
f FT (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dagenais, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TSF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FΤ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Harrison, M.J.
                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Torrey
                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The Salk
Pines Road,
                                                                                                                                            528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLN
                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-DEC-1999
Lete cds.
                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    700
                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                              (PEBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lа
                                                                                                              0,
```

```
REFERENCE
AUTHORS
TITLE
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
E38986
LOCUS
                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                            Query Match
Best Local S
Matches 432
                                                                                                                                                                                                                                                                                                                                                        JOURNAL.
                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
  63
                                                                                                                                                             PI TAKASHI ARAKI, KYOJI KOBAYASHI, KENICHI OGAWA, MAKOTO SHIRAI PC.
A01H1/00, A01H5/00, C12N5/10, C12N15/09//(C12N5/10, C12R1:91), PC
(C12N15/09, C12R1:91), C12N5/00, C12N15/00, (C12N5/00, C12R1:91), PC
(C12N15/00, C12R1:91)
CC
FH Key
Location/Qualifi
 ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCAGAAATTTCTACACCTTGGTTATGGTGGATCCAGATGTGCCGAGTCCAAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACTTCAACTGCCAGAGGGAGAATGGCTGTGGGGGAAGAAGAACGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTACAATTGTCAGAGGGAGGAGGTGGCTGCGGAGGAAGAAGACTTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTTCAACACTCGTGAGTTTGCTGAGATCTACAATCTTGGTCTTCCTGTGGCTGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGTTGGTATTGTTCCGGCAACTCGGAAGACAAACGGTTTATGCACCGGGGTGGCGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTGGCAATGAGGTGGTGTTACGAGAGTCCACGTCCCCCTCGGGAATTCATCGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCAACGAGAATATCTCCACTGGTTGGTGACTGATATACCTGCCACCACTGGAAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTCCGAGAATATCTCCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E38986
Method
                                                                                                                                                                                                                                                                                                                                            TORAY IND INC
                                                                                                                                                                                                                                                                                                                                                      Method for shortening plant generation and Patent: JP 2000139250-A 2 23-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                    Araki,T
                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP 2000139250-A/2.
Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E38986.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E38986
                                                                                                                                                                                                                                                                                                                                                                                                         Rosidae; eurosids II; Brassicales;
                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 528)
                                                                                               122
                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for shortening plant
                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                ., Kobayashi, K., Ogawa, K. and Shirai, M.
                                                                                                                                /organism='Arabidopsis'
1.ccation/Qualifiers
                                                                                             /organism="Arabidopsis"
/db_xref="taxon:3701"
117 c 142 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:18625005
                                        43.7%;
                             0
                            Score 374.4; DB 6;
Pred. No. 4.7e-78;
0; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 bp DNA
generation
                                                                                                 147
                                                                                               đ
                                                                                                                                                                                                                                                                                                                                                                                                            Brassicaceae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                   plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
plant.
                             Indels
                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT
                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-JAN-2002
                             Gaps
 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                             0
```

밁

ATGTCTTTAAGTCGTAGAGATCCTCTCGTGGTCGGCAGTGTTGTTGGAGATGTTCTTGAT

60

```
JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
AB027456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Locus
                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                  AUTHORS
                             CDS
                                                       gene
                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTACAATTGTCAGAGGGAGAGTGGCTGCCGGAGGAAGAAGACTTTAG 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTGGCAATGAGGTGTGTGCTACGAGAGTCCACGTCCCCCTCGGGAATTCATCGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGAAATTTCTACACCTTGGTTATGGTGGATCCTGATGTGCCGAGTCCAAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGAGTTGGTGGAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGGGGACTAATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACTTCAACTGCCAGAGGGAGAATGGCTGTGGGGGAAGAAGAACGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGTTCAACACTCGTGAGTTTGCTGAGATCTACAATCTTGGTCTTCCTGTGGCTGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGTTGGTATTGTTCCGGCAACTCGGAAGACAAACGGTTTATGCACCGGGGTGGCGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTGGCAATGAGATTGTGTGTGTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGGATCTAAGGCCTTCTCAAGTTCTGAACAAACCAATAGTGGAGATTGGAGGAGACGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTTCACGAGGTTGGTCTCTTTAAGGTCACTTATGGCCATAGAGAGGTTACTAATGGC
                                                                                                                                                                                                                                                                                                                                                                                                 Citrus unshiu (strain:Miyagawa-wase satsuma mandarin) stage juice sac and pulp segment cDNA to mRNA. Citrus unshiu
                                                                                                                                                                            Submitted (17-MAY-1999) Mitsuo Omura, National Institute of Fruit Tree Science, Department of Citriculture, Okitsu; Okitsu, Shimizu, Shizuoka 424-0292, Japan (E-mail:om9330@okt.affrc.go.jp, Tel:81-543-69-7108, Fax:81-543-69-2115)
                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Sapindales; Rutaceae; Citrus.
                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                             2 (bases 1 to 745)
Omura, M., Kobayashi, Y. and Araki, T.
                                                                                                                                                                                                                                                                             20050958
                                                                                                                                                                                                                                                                                                     A pair of related genes with antagonistic roles flowering signals
                                                                                                                                                                                                                                                                                                                                 Kobayashi,Y., Kaya,H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AB027456.1 GI:4903138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AB027456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Citrus unshiu CiFT mRNA,
                                                                                                                                                                                                                                                                                                                                                (sites)
                                                                                                                                                                                                                                                                                        286 (5446),
 /gene="CifT"
/note="extensive
                                                                  /dev_stage="developing stage juice sac and
/note="partial sequence (pcMFRI727.131) is
Accession Number C24153"
                                                                                                        /organism="Citrus unshiu"
/strain="Miyagawa-wase satsuma
/db_xref="taxon:55188"
                                                                                                                                                                 Location/Qualifiers
                                       /gene-"CiFT"
                             . 629
                                                                                                                                                                                                                                                                                         1960-1962 (1999)
                                                                                                                                                                                                                                                                                                                                 Goto, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   745 bp
complete
homology
                                                                                                                                                                                                                                                                                                                                 Iwabuchi, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
cds.
 б
 Ŧ
                                                                                                                        mandarin"
 (FLOWERING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  528
                                                                                                                                                                                                                                                                                                                   in mediating
                                                                                                                                                                                                                                                                                                                                 Araki, T.
                                                                               pulp segment"
deposited in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLN
 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                            developing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-FEB-2000
Н
                                                                                                                                                                                                         Shimizu,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                               γQ
                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                         SOURCE
```

```
RESULT 14
AX478001
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                     REFERENCE
                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                    TITLE
                   JOURNAL
                                                  AUTHORS
                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                          574
                                                                                                                                                                                                                                                                                                                                                                                            514
                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                               454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCGTGAGCTCAAACCTTCTGAAGTTCTGAACCAGCCTAGGGCTGAAATTGGTGGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                                                                                                                                         TTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAG 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGTCTTTGTGTTCCGGCAACTTGGGAGGCAGACTGTTTATGCACCAGGGTGGCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTTGGCCAAGAGATTGTGAAACTATGAAAGCCCTAGGCCAACGATGGGGATTCACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTTAGGACATTTTATACTTTGGTAATGGTTGATCCTGATGCACCAAGCCCAAGTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATATGTCTAGCAGGGAGAGAGCTCCTCTTATTGTTGGCCGCGTTGTTGGTGATGTTCTTG
                                                                                                                                                                                                                                                                                                                          TCTACTTCAACTGCCAGAGGGAGAGCGGATCCGGCGGAAG
                                                                                                                                                                                                                                                                                                                                                                                          AGAACTTCAGCACGAGGGATTTTGCTGAGCTTTACAATCTGGGACCTCCGGTGGCCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                            AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAATTTTACAAGAACAATTCCAATGAGGATTACCTATTCAAACAAGGATGTTAATAATG
                                                                                                                   Zea mays
Eukaryota;
                                                                                                                                                                                                     Sequence
AX478001
Cahoon, E.B., Cahoon, R.E., Floral development genes Patent: WO 0244390-A 11 (E. I. du Pont de Nemours
                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC clade; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                       Zea
                                                                                                                                                                                       AX478001.1
                                                                                                                                                                                                                                        AX478001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                       mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="BAA77836.1"
/db_xref="G1:4903139"
/db_xref="G1:4903139"
/translation="MSSRERDPLIVGRVVGDVLDNFTRTIPMRITYSNKDVNNGRELK
/translation="MSSRERDPLIVGRVVGDVLDNFTRTIPMRITYSNKDVNNGRELK
PSEVLMQPRAEIGGDDKSRERDFVLVMVDPDAPSPSDPSLREYLHWIVTDIPATYGASFG
QEIVNYESPRPTMGIHRFVFVLFRQLGRQTVYAPGWRQNFSTRDFAELYNLGPPVAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similar to mammalian phophatidylethanolamine protein (PEBP) and hippocampal cholinergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YFNCQRESGSGGRPVRR®
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neurostimulating peptide (HCNP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AB027504) and TSF (TWIN SISTER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                                                                                                                                        from
                                                    Cahoon, R.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33.8%;
72.3%;
                                                                                                                                                                                                                      Patent
                                                                                  Andropogoneae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 289.6; DB |
Pred. No. 5.1e-58
                   06-JUN-2002;
                                                                                                                                                                                                                        899 bp
WO0244390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       φ
                                                    Klein, T.M.,
 Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       220
                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB: 8;
 (us)
                                                    Rafalski
                                                                                                                                                                                                                                                                                                                          613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FT, AB027506) genes
                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                    and
                                                                                                                                                                                                                                          PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         binding
                                                                                                                                                                                                                                          12-AUG-2002
                                                    Sakai,H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153
                                                                                                                                                                                                                                                                                                                                                                                            573
                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                             513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

```
JOURNAL
REFERENCE
                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                           RESULT 15
AB052943
                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                                           AUTHORS
                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGGAGAGTGGCTGCGGAGGAAGAAGA 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCCAATCTGTCAGGCAAACTATTTATGCGCCAGGATGGAGACAAAATTTCAACACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCG 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCCATTGGTTGGCTGACTATATCCCTGCTACAACTGGAACAACCTTTTGGCAATGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACTTTGGTAATGGTGGATCCTGACTCACCAAGTCCAAGCAATCCAACAAAAAGAGAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATA 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGGGACCCACTTGTTGTAGGCAACGTAGTTGGAGATATCTTGGACCCATTTATCAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACCTTCTTGATCCGTTTAATAGATC 136
                                                                                                                                                                                                                                                                                                                                                                                 AAGGGAGAATGGGTGCGGTGGCAGACGA 560
                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACTTCTCAGCACTCTATAATCTAGGACCACCTGTGGCCTCAGTGTTCTTCAACTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTAAGCTATGAAAGCCCAAAGCCAAGTGCTGGAATACATCGCTTCGTCTTTGTTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTCACTGGTTGGTGACAGATATTCCAGAATCAACAGATGTGAGCTTTGGAAATGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCATCACTCAGAGTCCTATACAACAATAGAGAACTGACTAATGGATCTGAGTTCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 al Similarity
346; Conser
                                                                                                                                mRNA.
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
2 (bases 1 to 847)
Yano, M. and Kojima, S.
Direct Submission
Submitted (23-DEC-2000) Masahiro Yano, National Institute of Agrobiological Resources, Department of Molecular Genetics; Kannondai, Tsukuba, Ibaraki 305-8602, Japan
                                                                                                               Kojima,
Hd3a, a
                                                                                                                                                                                                                                                                    AB052943
                                                                                                                                                                                                                                                                                             AB052943 847 bp m Oryza sativa (indica cultivar-group)
                                                                                   Unpublished
                                                                                                                                                                                                                            Oryza sativa
                                                                                                                                                                                                                                                        AB052943.1
                                                                                                                                                                                                                                                                                 cultivar: Kasalath.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                               S., Monna,L., a quantitative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:4577"
187 c 185 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                  in rice
                                                                                                                                                                                                                                                        GI:14517621
                                                                                                                                                                                                                         (indica cultivar-group)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29.1%;
                                                                                                             Fuse, T., Sasaki, T. and Yano, M. trait locus, involves in the p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 248.8;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.2e-48;
nes 162;
                                                                                                                                                                                                                                                                                                mRNA
p) Hd3a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 6;
                                                                                                                                                                                                                         (cultivar:Kasalath) cDNA
                                                                                                                                                                                                                                                                                              mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                              complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           899;
                                                                                                               promotion
                                                                                                                                                                                                                                                                                              PLN 21-MAR-2002
plete cds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                       532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               196
                                                                                                                of
                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

time

2820

secs

1,

```
õ
                                                                                                               밁
                                                                                                                                           Q
                                                                                                                                                                               B
                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
Search completed: May
                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                558
                                                                                                                594
                                                                                                                                               498
                                                                                                                                                                                534
                                                                                                                                                                                                             438
                                                                                                                                                                                                                                               474
                                                                                                                                                                                                                                                                                                             414
                                                                                                                                                                                                                                                                                                                                             318
                                                                                                                                                                                                                                                                                                                                                                             354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      138
                                                654
                                                                                                                                                                                                                                                                             378
                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174 AGGGACCCTCTTGTGGTTGGTAGGGTTGTGGGTGATGTGCTGGACGCGTTCGTCCGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                               AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGA
                                                                                                                                 GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                               CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                                                                                                                                                                                                            GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT
                                                                                                                                                                                                                                                                                                           CTACATTGGTTGGTCACTGATATTCCTGGTACTACTGCAGCGTCATTTGGGCAAGAGGTG
                                                                                                                                                                                                                                                                                                                            CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCA 137
                                                CGCGAGGCCGGCTCCGGCGGCAGGAGGGTCTACA
                                                                                                                GACTTCGCCGAGCTCTACAACCTCGGCTCGCCGGTCGCCGCCGTCTACTTCAACTGCCAG
                                                                                                                                                                               CAGCAGCTGGGGCGTCAGACAGTGTACGCGCCCGGGTGGCGTCAGAACTTCAACACCAAG
                                                                                                                                                                                                                                             ATGTGCTACGAGAGCCCAAGGCCAACCATGGGGATCCACCGGCTGGTGTTCGTGCTGTTC
                                                                                                                                                                                                                                                                                                                                                                             ACCCTTGTGATGGTAGACCCAGATGCACCAAGCCCAAGTGACCCTAACCTTAGGGAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                         ACTITIGGTTATIGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCAACCTCAAGGTCACCTATGGCTCCAAGACCGTGTCCAATGGCTGCGAGCTCAAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCATGGTCACCCACCAGCCTAGGGTCGAGGTCGGCGGCAATGACATGAGGACATTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 al Similarity
348; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fax:81-298-38-7468)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (E-mail:myano@abr.affrc.go.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
/protein_id=*Ba61029.1"
/protein_id=*Ba61029.1"
/protein_id=*Ba61029.1"
/db_xref=*Gd::14517622"
/translation="MAGSGRDRDPLVVGRVVGDVLDAFVRSTNLKVTYGSKTVSNGCE
/translation="MAGSGRDRDPLVVGRVVGDVLDAFVRSTNLKVTYDIPGTTAAS
/txpsm/vrpgpkvEvGGNDMRTFYTLVM/DPDAFSPSDPNLREYLHWLVTDIPGTTAAS
FGQEVMCYESRPFMGHHRLVFYLFQQLGRQTVYAPGWRQNFNTKDFAELYNLGSPVA
AVYFNCQREAGSGGRRVYN"
a 228 c 224 g 194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="Hd3a"
153. .692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:39946"
/chromosome="6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Oryza sativa
/cultivar="Kasalath"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="Hd3a"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.0%;
 2003,
   23:30:01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 248.4; DB 8;
Pred. No. 2.8e-48;
0; Mismatches 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel:81-298-38-7443
                                                                                591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (indica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cultivar-group)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                             473
                                                                                                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                                                                                                                             413
                                                                                                                653
                                                                                                                                               557
                                                                                                                                                                               593
                                                                                                                                                                                                                                               533
                                                                                                                                                                                                                                                                                                                                             377
                                                                                                                                                                                                                                                                                                                                                                                                         317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      197
                                                                                                                                                                                                             497
                                                                                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    233
```

0;

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
528
377.6
374.4
180.2
176.8
                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-845-849-1
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       мау
                                                                100.0
100.0
80.9
80.8
61.7
44.1
                                                                                                                                                                                                                                              Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.5 Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2, 2003, 02:33:53; Search time 282.5 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIDS2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1987
                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1998.DAT:
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1996.DAT:/
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*
                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                             ij
                                                              AAZ28491
AAZ28491
AAC34682
AAC48359
AAA60683
AAC42966
                   AAA60684
AAC90636
                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
6823.754 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4370478
              Arabidopsis thalia
Arabidopsis thalia
Arabidopsis thalia
Arabidopsis thalia
Arabidopsis thalia
Strawberry floweri
                                                                                                                                                                                                                      Description
                                                                                                                                                 Flowering locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O
```

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10
48	48	48	48	48.2	48.2	48.4	٠	48.6	٠	48.8	49	49.2	49.2	49.2	49.2	50	50.2	50.2	51	51.2	51.8	52.8	55.6	63	71.8	80	82.6	116	145.8	161.2	175	176	176	176	176
5.6	٠	•		5. 6			•	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.8	5.9	5.9		٠	6.1			7.4	8.4		9.6	13.6	17.0	18.8		0	20.6	20.6	20.6
910	910	654	551	.939	367	7589	475	427	2637	956	1012	83391	978	925	503	649	18585	557	988	970	1637	2426	567	4952	822	1430	3696	929	4512	519	787	1225	792	792	762
24	24	22	21	24	22	24	22			24												22	24	22	12	18	22	18	19	22	24	24	24	24	24
ABN73981	ABN73980	AAH34361	AAF16381	ABN74051	AAS28106	ABK28390	AAK62481	ABQ54500	AAD34120	ABN74279	ABA77106	ABQ67094	ABA77091	ABN74030	ABK41982	AAK60828	ABL34609	AAH35052	ABN74181	ABN73995	AAZ30973	AAD17465	ABQ55599	AAC90667	AAQ14832	AAT60142	AAC90666	AAT60139	AAV66749	AAC90668	ABK82094	ABK82122	ABK82092	ABK82091	ABK82093
Bovine	Bovine embryonic g	Human colon cancer	C)	Bovine embryonic g	Novel cDNA encodin	DNA transcription	Human immune/haema	Human ovarian anti		Bovine embryonic g	Proliferative glom	Human angiogenesis		Bovine embryonic g	cDNA encoding nove	Human immune/haema	Human metastasis a	æ	Bovine embryonic g	Bovine embryonic g	Porcine complement	Spinach lycopene e	Human ovarian anti	Strawberry floweri	OV-16 antigen. On	CO.	Strawberry floweri		S	\vdash		DNA encoding novel	el floral	ncoding	Novel floral meris

ALIGNMENTS

AAZ28490 standard; cDNA; 856

ВP

RRESULT 1
AAZ2840
ID AAZ2840
XX AAZ2840
AC AAZ2
XX Flow
XX Flow
XX Flow
XX Flow
XX Arab
XX Ara Flowering locus T gene; FT; flowering time; modulator; early flowering; antibody; cellular binding protein; crop; ss. Weigel D; WO9953070-A1 17-JAN-2000 AAZ28490; (SALK) SALK INST BIOLOGICAL STUDIES 15-APR-1998; 13-APR-1999; 21-OCT-1999 Arabidopsis thaliana. Flowering locus T (FT) gene (first entry) 98US-0060726 99WO-US08151 63..590 /*tag= a /product= FT /note= "Flowering locus Location/Qualifiers

Arabidopsis termin

```
Š
                          B
                                            δÃ
                                                                          B
                                                                                                 δ
                                                                                                                           В
                                                                                                                                             S
                                                                                                                                                                          B
                                                                                                                                                                                                   Š
                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          on chromosome 1. The FT polypeptide is used in the invention to modulate flowering time in many mono and di-cotyledonous plants. The FT polynucleotide sequence is used for recombinant production of the polypeptide, and as a source of antisense, ribozyme or triplex forming sequences. The FT polypeptide can also be used to raise antibodies and to screen for modulators or cellular binding proteins. The methods of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence is the flowering locus T (FT) gene of Arabidopsis thaliana. FT regulates flowering in plants by modulating flowering time. Overexpression of FT results in early flowering, while loss of function mutations or antisense directed to FT causes late flowering. The FT polypeptide has a molecular weight of approximately 20kb, and is located on the modular resists of approximately 20kb.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New flowering locus T polypeptide that regulates particularly used to accelerate flowering -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   invention
   661
                            601
                                                                                                    541
                                                                                                                            481
                                                                                                                                                   481
                                                                                                                                                                             421
                                                                                                                                                                                                     421
                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA
                                     CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA 660
                                                                       AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                          CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                           CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                          GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                            GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                            ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            al Similarity
856; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5; Fig 2; 64pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                allow for the production of crops at any time of year
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 856; DB 20; ilarity 100.0%; Pred. No. 3.8e-190; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          263 A; 150 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                         660
                                                                                                                                                                            480
                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
 720
                                                                          600
                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                          540
                                                                                                                                                  540
                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Ş

TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA

Query Match Best Local Matches

Local Similarity

100.0%; ilarity 100.0%; Conservative (

0

Score 856; DB 20; Pred. No. 3.8e-190;); Mismatches 0;

Length Indels

0;

Gaps 60

0

Sequence

856

BP;

249

A; 194 C;

150 G;

263 T; 0 other;

```
RESULT 2
AAZ284491/c
ID AAZ284
XX AAZ284
XX AAZ284
XX IT-JAN
XX Flower
XX Flower
XX Arabid
OS Arabid
XX Arabid
XX Arabid
XX Hoop953
XX IT-APR
XX I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                     This is the flowering locus T (FT) gene antisense polynucleotide construct of the invention pSKIO60. FT regulates flowering in plants by construct of the invention pSKIO60. FT regulates flowering in plants by comparing the invention pSKIO60. FT regulates flowering in plants by comparing the invention mutations or antisense directed to FT causes late flowering. The FT polypeptide has a molecular weight of comproximately 20kb, and is located on chromosome 1. The FT polypeptide is used in the invention to modulate flowering time in many mono and control of the polypeptide sequence is used for recombinant production of the polypeptide, and as a source of antisense, ribozyme or triplex forming sequences. The FT polypeptide can also be used to raise antibodies and to screen for modulators or cellular binding proteins. The methods of the invention allow for the production of crops at any time of year.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New flowering locus T polypeptide that regulates flowering time, particularly used to accelerate flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Flowering
antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Fig 3; 64pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9953070-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ28491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ28491 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SALK ) SALK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1999-611305/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATAAGTGTGTAATAAAAATGAGAGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATAAGTGTGTAATAAAAATGAGAGGGGGGGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              locus T gene; FT; flowering time; modulator; early flowering; cellular binding protein; crop; antisense construct; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      locus T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INST BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0060726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US08151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (FT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antisense insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
```

```
RESULT 3
AAG3462
ID AAG3
XX
AC AAG3
XX
XX
IT 17-0
DT 17-0
DT Arab
XX
EW Hybr
KW Hybr
KW Brot
KW meta
XX
          Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                                                       Arabidopsis
                                                                            17-OCT-2000
                                                                                                  AAC34682;
                                                                                                                       AAC34682 standard; DNA; 775
                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  496
                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                 316
                                                                                                                                                                                                                                                                                                                                                                                                                                            376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               736
                                                                                                                                                                                                 841
                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                  136
                                                                                                                                                                                                                                                                                                             196
                                                                                                                                                                                                                                                                                                                                                       256
                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    856
                                                                                                                                                                                                                        76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                             16
                                                                                                                                                                                                                                                                                                                                                    CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                                            TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                      CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGTGTTTATATTTCGACAGCTTGGCAGCAAACAGTGTATGCACCACGGTGGCGCCC
                                                                                                                                                                          AAAAAAAAAACTCGAG 856
|||||||||||||||||
AAAAAAAAAAAACTCGAG 1
                                                                                                                                                                                                                      TCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                               TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                           TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGGCCTATAGTAGTTCAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                                                       thaliana
                                                                           (first entry)
                                                       DNA fragment
                                                                                                                       ВP
                                                       SEQ
                                                       ij
                                                       Š:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    797
                                                                                                                                                                                                                       17
                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                            137
                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                77
                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                 257
  23-APR-1999;
28-APR-1999;
30-APR-1999;
30-APR-1999;
04-MAY-1999;
05-MAY-1999;
06-MAY-1999;
18-JUN-1999
21-JUN-1999
22-JUN-1999
23-JUN-1999
23-JUN-1999
23-JUN-1999
23-JUN-1999
24-JUN-1999
23-JUN-1999
23-JUN-1999
23-JUN-1999
23-JUN-1999
                                                                                                                                                                                                         14 MAY 1999
118 MAY 1999
118 MAY 1999
119 MAY 1999
20 MAY 1999
21 MAY 1999
24 MAY 1999
25 MAY 1999
27 MAY 1999
28 MAY 1999
01 JUN 1999
01 JUN 1999
01 JUN 1999
01 JUN 1999
10 JUN 1999
11 JUN 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-FEB-1999

05-MAR-1999

09-MAR-1999

23-MAR-1999

25-MAR-1999

29-MAR-1999

01-APR-1999

06-APR-1999

08-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                          11-MAY-1999;
14-MAY-1999;
14-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-MAY-1999;
07-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-APR-1999;
23-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-APR-1999;
19-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000EP-0301439
9908-0130449.
9908-0130419.
9908-0130419.
9908-0132484.
9908-0132487.
9908-0132487.
9908-0132487.
9908-0132487.
9908-0134218.
9908-0134219.
9908-0134219.
9908-0134219.
9908-0134219.
9908-0135124.
9908-0135124.
9908-0135124.
9908-0135124.
9908-0136021.
9908-0136021.
9908-0136021.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013622.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
9908-013625.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0126785.
99US-0127462.
99US-0128234.
99US-0128714.
99US-0129845.
99US-0130077.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0123180.
99US-0123548.
99US-0125788.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0126264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0121825
```

Q

밁 Qy Ъ.

Db δÃ 망 Qy 밁 δÃ

γQ Ъ δÃ

밁

Qy

В

ρ

밁

Ωy

B

δÃ

밁

QΥ 밁 δÃ В δÃ 밁

밁

```
Qy
                                            В
                                                      δÃ
                                                                      В
                                                                                   Q
                                                                                                 뫄
                                                                                                           δÃ
                                                                                                                                     δÃ
                                                                                                                                                             Ωy
                                                                                                                          В
                                                                                                                                                     밁
                                                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                       29-SEP-1999
04-OCT-1999
05-OCT-1999
06-OCT-1999
07-OCT-1999
13-OCT-1999
13-OCT-1999
14-OCT-1999
14-OCT-1999
14-OCT-1999
14-OCT-1999
14-OCT-1999
14-OCT-1999
12-OCT-1999
21-OCT-1999
22-OCT-1999
22-OCT-1999
23-OCT-1999
25-OCT-1999
26-OCT-1999
26-OCT-1999
27-OCT-1999
28-OCT-1999
28-OCT-1999
28-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                  15-SEP-1999;
16-SEP-1999;
20-SEP-1999;
22-SEP-1999;
23-SEP-1999;
24-SEP-1999;
28-SEP-1999;
29-SEP-1999;
                                                                                                                                                                             ry Match
: Local Sim
thes 693;
       405
                    365
                                345
                                              305
                                                           285
                                                                       245
                                                                                   225
                                                                                                 185
                                                                                                             165
                                                                                                                          125
                                                                                                                                       105
                                                                                                                                                     65
                                                                                                                                                                45
                   GCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACT
                                           GTTGGAGACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAA
                                                                                                                                                   GCAGGAATTCATCGTGTGTGTTATATTGTTTCGACAGCTTGGCAGCAAACAGTGTAT
                                                                                                                                                                             Similarity 99.193; Conservative
                                                                                                                                                                                                      9903-015408
9903-015479
9903-0155139
9903-0156458
9903-015659
9903-0157753
9903-0158829
9903-0158229
9903-0159294
9903-0159293
9903-0159293
9903-0159293
9903-0159293
9903-0159293
9903-0159331
9903-0160767
9903-0160767
9903-0160814
9903-0160814
9903-0161405
9903-0161405
9903-0161405
9903-0161361
9903-0161361
                                                                                                                                                                                   80.98;
99.98;
                                                                                                                                                                             Score 692.4;
Pred. No. 5.3e
0; Mismatches
                                                                                                                                                                             0;
                                                                                                                                                                           ; DB 21;
5.3e-152;
hes 1;
                                                                                                                                                                              Indels
                                                                                                                                                                                         Length
                                                                                                                                                                             0,
                                                                                                                                                                             Gaps
       464
                   424
                                404
                                                         344
                                                                       304
                                                                                                             224
                                                                                                                          184
                                                                                                                                        164
                                                                                                                                                     124
                                                                                                                                                                104
                                              364
                                                                                   284
                                                                                                 244
                                                                                                                                                                             0
```

30-JUN-1999
01-JUL-1999
01-JUL-1999
02-JUL-1999
08-JUL-1999
11-JUL-1999
12-JUL-1999
13-JUL-1999
13-JUL

990S-0141287
990S-0141287
990S-014254
990S-014254
990S-014254
990S-014254
990S-01426
990S-0144005
990S-0144005
990S-0144005
990S-0144005
990S-0144005
990S-0144005
990S-0144321
990S-0144321
990S-0144321
990S-0144333
990S-0144322
990S-0144321
990S-0144333
990S-0144321
990S-0146388
990S-0146388
990S-0146388
990S-0146388
990S-0146388
990S-0146388
990S-0146388
990S-0147004
990S-0151080
990S-0151080
990S-0151080
990S-0151080
990S-0151080

אמים אי או	
RESULT 4 AAC48355 AAC48355 AAC48355 AC AAC AC A	DD
948359 sta 948359; 00CT-2000 bbidopsis bridisatic thein idea cabbi idepsis bidopsis	425 GCAGGAAT 465 GCACCAGG 485 GCACCAGG 525 CTTCCCGT 545 CTTTAGAT 605 CTTTAGAT 611 665 ATCTATAGAT 705 CTATAGTA 715 CTATAGTA 715 CTATAGTA
standard; DNA; 754 BP. 100 (first entry) 1.s thaliana DNA fragment SEQ ID NO: 57192. 1.tion assay; genetic mapping; gene expression control; 1.tentification; signal transduction pathway; 1.pathway; promoter; termination sequence; ss. 1.s thaliana. 1A2. 1.o0. 1.o0. 1.o0. 2.o0.OEP-0301439. 1.op; 1	GCAGGAATTCATCGTGTGTGTTATATTGGTTTGGACAGCTTGGAGGAACAGTGTAT GCACCAGGGTGGCCCAGAACTTCAACACTCGCGAGTTTGCTGAGAGTCTACAATCTCGGC
	484 524 544 604 604 664 704
א ה א ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה ה	אק פר א היי
18 - JUN - 1999 22 - JUN - 1999 23 - JUN - 1999 23 - JUN - 1999 24 - JUN - 1999 26 - JUN - 1999 27 - JUN - 1999 28 - JUN - 1999 29 - JUN - 1999 20 - JUN - 1999 21 - JUN - 1999 22 - JUN - 1999 21 - JUN - 1999 21 - JUN - 1999 22 - JUN - 1999 23 - JUN - 1999 21 - JUN - 1999 21 - JUN - 1999 22 - JUN - 1999 23 - JUN - 1999 24 - JUN - 1999 27 - JUN - 1999 28 - JUN -	-MAY-199 -MAY-199 -MAY-199 -MAY-199 -MAY-199 -MAY-199 -JUN-199
9908 -0139459 9908 -0139461 9908 -0139461 9908 -0139463 9908 -0139763 9908 -0139763 9908 -0140953 9908 -0140823 9908 -0142803 9908 -0142803 9908 -0142803 9908 -0142803 9908 -0142970 9908 -0143542 9908 -0143542 9908 -0143542 9908 -0143542 9908 -0143542 9908 -0143542 9908 -0143542 9908 -0144085 9908 -0145085 9908 -0145085	9US-013494 9US-013512 9US-013503 9US-013602 9US-013602 9US-013702 9US-013772 9US-013775 9US-013775 9US-013804 9US-013804 9US-013804 9US-013914 9US-013914 9US-013914 9US-013918

0

```
990S-0147703

990S-0147704

990S-0147704

990S-0147705

990S-0147703

990S-0147703

990S-0147703

990S-0147703

990S-0147703

990S-014811

990S-014811

990S-014811

990S-014811

990S-014811

990S-0149426

990S-0149426

990S-0149426

990S-0149723

990S-0149723

990S-0149723

990S-0149723

990S-0149723

990S-0149723

990S-0149723

990S-0149723

990S-0149723

990S-0150866

990S-0150866

990S-0151065

990S-0151065

990S-0151065

990S-0151065

990S-0151065

990S-0151065

990S-0151065

990S-0151065

990S-015106761

990S-015931

990S-0150884

990S-0150884

990S-0150884

990S-0150984

990S-0160981

990S-0160980

990S-0160980

990S-0160980

990S-01610080

990S-01610080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S-0145951.
S-0146386.
S-0146388.
S-0146389.
S-0147038.
RESULT 5
AAA60683
AAA60683
ID AAA6
XX
AC AAA6
AC AAA6
AX
AC AAA6
AX
AX
AX
AX
AX
AX
AX
XX
Arah
XX
XX
SOLA
                                                                                                        밁
                                                                                                                   δõ
                                                                                                                                    В
                                                                                                                                               Qy
                                                                                                                                                              В
                                                                                                                                                                         Qy
                                                                                                                                                                                         밁
                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                        ρy
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PR PR PR PR PR PR PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-OCT-1999;
26-OCT-1999;
28-OCT-1999;
28-OCT-1999;
28-OCT-1999;
29-OCT-1999;
       Arabidopsis thaliana; solar radiation; ds.
                            Arabidopsis
                                          26-OCT-2000
                                                                      AAA60683
                                                                                                                                                                                                                     483
                                                                                                                                    663
                                                                                                                                                  645
                                                                                                                                                                603
                                                                                                                                                                                          543
                                                                                                                                                                                                       525
                                                                                                                                                                                                                                                  423
                                                                                                                                                                                                                                                                                          345
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Sim
                                                                                                        723
                                                                                                                      705
                                                                                                                                                                            585
                                                                                                                                                                                                                                   465
                                                                                                                                                                                                                                                                405
                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                      285
                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                 225
                                                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                                                                                                                                                                        105
                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                   45
                                                                                                        CTATAGTAGTTCAATATATAAAGTGTGTAATAA
                                                                                                                                                              AGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTT
                                                                                                                                    Similarity
                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 80.8%;
ilarity 100.0%;
Conservative
                            thaliana
                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0161360.
99US-0161361.
99US-0161920.
99US-0161992.
99US-0161993.
99US-0162142.
                                                                      DNA;
                                          entry)
                            nucleotide sequence
              Cruciferae; plant; control; flowering;
                                                                      528
                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 692; DE Pred. No. 6.5
                                                                                                         754
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 21; I
6.5e-152;
                            SEQ
                            IJ
                            NO: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                  704
                                                                                                                                                               662
                                                                                                                                                                            644
                                                                                                                                                                                          602
                                                                                                                                                                                                       584
                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                   524
                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                          404
                                                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                                    344
                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                284
                                                                                                                                                                                                                                                                                                                                                              224
242
                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                        164
                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                                   104
```

28-JUL-1999
02-AUG-1999
02-AUG-1999
03-AUG-1999
04-AUG-1999
05-AUG-1999
06-AUG-1999
06-AUG-1999
07-AUG-1999
08-AUG-1999
09-AUG-1999
11-AUG-1999
11-AUG

```
.04
                                                                                                                                 δõ
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                            닭
                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOX CCCCCCCCX PRINT PRIN
                                          Š
                                                                                              В
                                                                                                                                                                                      рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity Matches 528; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the present invention describes a method to accelerate plant generation and generation accelerated plants. The method uses a controlling gene functioning in the downstream of a gene under the control of solar radiation to accelerate plant generation using a gene functioning to accelerate the flowering time regardless of solar radiation. The method can control flowering time regardless of solar radiation. The method can control flowering time to a desired period by shortening the juvenile stage. The present sequence represents a specifically claimed farbidopsis nucleotide sequence, which is used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TORA ) TORAY IND INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP2000139250-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana.
    481
                                                                                              421
                                                                                                                                              483
                                                                                                                                                                                             361
                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-425906/37.
DB; AAB12459.
                                                                                                                                                                                                                                                                                       CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT 122
TTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAG
                                                                                                                                                                                           GTGTTTATATTTCTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGC
                                                                                              AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           528 BP; 143 A; 111 C; 129 G; 145 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to accelerate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61.7%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98JP-0320219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98JP-0320219.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 528; DB 21; 1
Pred. No. 1.1e-113;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            generation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            generation accelerated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
  528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    242
                                                                                                 480
                                                                                                                                              542
                                                                                                                                                                                                                                          482
                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
```

30-APR-1999; 04-MAY-1999; 05-MAY-1999; 06-MAY-1999; 06-MAY-1999; 07-MAY-1999;

99US-0130891. 99US-0131449. 99US-0132048. 99US-0132407. 99US-0132484. 99US-0132486.

19-APR-1999, L6-APR-1999;

99US-0130077. 99US-0130449. 99US-0130510.

99US-0127462. 99US-0128234. 99US-0128714.

99US-0129845

9908-0126785

05-MAR-1999 09-MAR-1999

99US-0123180 99US-0123548

99US-0121825

25-FEB-1999; 25-FEB-2000; 06-SEP-2000

2000EP-0301439

11-MAY-1999; 14-MAY-1999; 14-MAY-1999; 14-MAY-1999;

99US-0132487 99US-0132863 99US-0134218 99US-0134218 99US-0134219 99US-0134221 99US-0134370 99US-0134768

14-MAY 1999; 18-MAY 1999; 19-MAY 1999; 20-MAY 1999; 21-MAY 1999; 24-MAY 1999; 25-MAY 1999; 27-MAY 1999; 28-MAY 1999; 01-JUN 1999; 03-JUN 1999;

16-JUN-1999; 17-JUN-1999; 18-JUN-1999; 18-JUN-1999;

NDC-80

990S-0134941 990S-0135124 990S-0135629 990S-0136782 990S-0136782 990S-0136782 990S-0137528 990S-0137502 990S-0137502 990S-0137502 990S-0138640 990S-0138647 990S-0138647 990S-0139452 990S-0139453 990S-0139453 990S-0139453 990S-0139453 990S-0139453 990S-0139453 990S-0139453 990S-0139453

14-JUN-1999;

```
RESULT 6

AACA296

AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hybridisation assay; genetic mapping; gene expression protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Arabidopsis thaliana DNA fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-0CT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAC42966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC42966 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pathway; promoter; termination sequence;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   control;
```

18-JUN-1999
18-JUN-1999
18-JUN-1999
18-JUN-1999
18-JUN-1999
18-JUN-1999
18-JUN-1999
22-JUN-1999
23-JUN-1999
23-JUN-1999
23-JUN-1999

```
Š
                                                                  밁
                                                                                                                                     멂
                                 В
                                                                                 Q
                                                                                                  Query Match
Best Local Similarity
Matches 434; Conserv
                                                                                                                                   13-SEP-1999
13-SEP-1999
15-SEP-1999
16-SEP-1999
20-SEP-1999
22-SEP-1999
23-SEP-1999
24-SEP-1999
24-SEP-1999
29-SEP-1999
04-OCT-1999
04-OCT-1999
07-OCT-1999
07-OCT-1999
13-OCT-1999
14-OCT-1999
15-OCT-1999
16-OCT-1999
21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-AUG
23-AUG
23-AUG
25-AUG
26-AUG
26-AUG
27-AUG
27-AUG
27-AUG
27-AUG
30-AUG
31-AUG
31-AUG
01-SEP
121
                 183
                                                  123
                                 61
                                                                                   63
                                                                  \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -SEP-1999
                              ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT
        TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGAC
TTGGATCTAAGGCCTTCTCAAGTTCTGAACAAACCAATAGTGGAGAATTGGAGGAGACGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;-1999
;-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;-1999;
;-1999;
;-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1999
                                                                                                 44.1%;
nilarity 82.2%;
Conservative
                                                                                                                                   9908-0149929
9908-0149929
9908-0149930
9908-0150866
9908-0151066
9908-0151066
9908-01513739
9908-0151438
9908-0151370
9908-0153758
9908-0154018
9908-0154018
9908-0155139
9908-0155139
9908-0155139
9908-0155139
9908-0155139
9908-0156458
9908-0158232
9908-0158232
9908-0158232
9908-0158232
9908-0159234
9908-0159234
9908-0159234
9908-0159234
9908-0159234
9908-0159234
9908-0160981
9908-0160981
9908-0160981
9908-0161404
9908-0161406
9908-0161359
9908-0161359
                                                                                                 Score 377.6; DB 21
Pred. No. 1.2e-78;
0; Mismatches 94;
                                                                                                                   21;
                                                                                                  Indels
                                                                                                                   Length
                                                                                                  0;
                                                                                                 Gaps
                              120
180
               242
                                                182
                                                                 60
                                                                                 122
                                                                                                  0;
```

99US -0139459 99US -0139461 99US -0139461 99US -0139763 99US -0139750 99US -0140353 99US -0140353 99US -0140823 99US -0141287 99US -0141287 99US -0142055 99US -0142055 99US -0142390 99US -0142390 99US -0142390 99US -0143624 99US -0144362 99US -0144362 99US -0144331 99US -0144333 99US -0144333 99US -014518 99US -0145218 99US -0145218 99US -0145218 99US -0145218 99US -0147204 99US -0147204 99US -0147204 99US -0147303 99US -0148311 99US -0148319 99US -0148319 99US -0148319 99US -0148319 99US -0149368 99US -0149368 99US -0149368 99US -0149368 99US -0149368 99US -0149368

24-JUN-1999
28-JUN-1999
29-JUN-1999
30-JUN-1999
30-JUN-1999
01-JUL-1999
02-JUL-1999
03-JUL-1999
04-JUL-1999
14-JUL-1999
15-JUL-1999
15-JUL-1999
16-JUL-1999
19-JUL-1999
19-JUL-1999
19-JUL-1999
19-JUL-1999
19-JUL-1999
19-JUL-1999
19-JUL-1999
20-JUL-1999
21-JUL-1999
21-JUL

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
Query Match
Best Local Similarity
Matches 432; Conserv
                                                                       the present invention describes a method to accelerate plant generation and generation accelerated plants. The method uses a controlling gene functioning in the downstream of a gene under the control of solar radiation to accelerate plant generation using a gene functioning to accelerate the flowering time regardless of solar radiation. The method can control flowering time to a desired period by shortening the juvenile stage. The present sequence represents a specifically claimed Arabidopsis nucleotide sequence, which is used in the exemplification
                                                                                                                                                                             Claim 5; Page 5; 6pp; Japanese
                                                                                                                                                                                                        A method to accelerate plant generation and plants -
                                                                                                                                                                                                                                      WPI; 2000-425906/37
                                                                                                                                                                                                                                                                                   11-NOV-1998;
                                                                                                                                                                                                                                                                                                        11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                     JP2000139250-A
                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana; solar radiation; ds.
                                            Sequence
                                                                                                                                                                                                                                                          (TORA ) TORAY IND INC
                                                                                                                                                                                                                                                                                                                              23-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                 Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA60684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA60684 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACTTCAACTGCCAGAGGGAGAATGGCTGTGGGGGAAGAAGAACGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGAACTTTAG 590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGTTTATATTTCGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGGCAATGAGATTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTCCGAGAATATCTCCATTGGTTGGTGACTATCCCTGCTACAACTGGAACAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTTGGTATTGTTCCGGCAACTCGGAAGACAAACGGTTTATGCACCGGGGTGGCGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTGGCAATGAGGTGGTGTGCTACGAGAGTCCACGTCCCCCCTCGGGAATTCATCGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACCAACGAGAATATCTCCACTGGTTGGTGACTGATATACCTGCCACCACTGGAAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAGAAATTTCTACACCTTGGTTATGGTGGATCCAGATGTGCCGAGTCCAAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCAGGAACTICTATACTITGGTTATGGTGGATCCAGAIGTTCCAAGTCCTAGCAACCCT
                                                                   present invention
                                            528
 Conservative
                                            ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                   98JP-0320219
                                                                                                                                                                                                                                                                                                        98JP-0320219.
                                            122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
         43.7%;
81.8%;
                                           A;
                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                           Cruciferae; plant; control; flowering;
                                           117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    528
                                           .<u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВP
Score 374.4; DB 2
Pred. No. 6.9e-78;
0; Mismatches 96
                                           142
                                           ç;
                                            147
                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ
                                          T; 0 other;
                    DB 21; Length
                                                                                                                                                                                                               generation
                                                                                                                                                                                                                                                                                                                                                                                                                                 IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                 NO: 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           528
                                                                                                                                                                                                                accelerated
0
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
0
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
```

```
Novel nucleic acid involved in controlling plant flowering processes useful for generating transgenic plants, in particular strawberry plants having altered flowering behavior such as early, delayed or day-neutral flowering
                                                                                                                                                                                                                                                                                                               Strawberry; harvesting;
                                                                              P-PSDB;
                                                                                                                   Oeller P,
                                                                                                                                                                    24-MAY-2000;
                                                                                                                                                                                  25-MAY-1999;
                                                                                                                                                                                                          24-MAY-2000;
                                                                                                                                                                                                                                      30-NOV-2000
                                                                                                                                                                                                                                                           WO200071722-A1
                                                                                                                                                                                                                                                                                       Fragaria vesca
                                                                                                                                                                                                                                                                                                                                                     Strawberry flowering regulation protein coding sequence
                                                                                                                                                                                                                                                                                                                                                                                  20-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                          AAC90636;
                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC90636 standard; cDNA;
                                                                                                                                          (DNAP )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTCCGAGAATATCTCCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                         2001-025165/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGTTCAACACTCGTGAGTTTGCTGAGATCTACAATCTTGGTCTTCCTGTGGCTGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTC 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGTTGGTATTGTTCCGGCAACTCGGAAGACAAACGGTTTATGCACCGGGGTGGCGCCAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCAACGAGAATATCTCCACTGGTTGGTGACTGATATACCTGCCACCACTGGAAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGC 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGTCTTTAAGTCGTAGAGATCCTCTCGTGGTCGGCAGTGTTGTTGGAGATGTTCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCAGAAATTTCTACACCTTGGTTATGGTGGATCCTGATGTGCCGAGTCCAAGCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGGATCTAAGGCCTTCTCAAGTTCTGAACAAACCAATAGTGGAGATTGGAGGAGACGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTTTCACGAGGTTGGTCTCTTTAAGGTCACTTATGGCCATAGAGAGGTTACTAATGGC 120
                                                                                                                                             DNA
                                                                              AAB50266
                                                                                                                   Gutterson
                                                                                                                                             PLANT TECHNOLOGY
                                                                                                                                                                                                                                                                                                               flowering regulation; fruit production; ss.
                                                                                                                                                                      2000US-0318789
                                                                                                                                                                                                            2000WO-US14297
                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                  99US-0318789
                                                                                                                   z
                                                                                                                                                                                                                                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                           floral homeotic gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             590
                                                                                                                                                                                                                                                                                                                           field crop;
                                                                                                                                                                                                                                                                                                                                                       SEQ ID
                                                                                                                                                                                                                                                                                                                                                       ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                       J
                                                   is
```

```
RESULT 9
AAT60140
ID AAT6
XX
AAT6
XX
AAT6
XX
AAT6
XX
ATA
DT 24-J
XX
Term
XX
Te
                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8×3000000×8
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 312; Conserv
                                       mutation
                                                                                                                          Arabidopsis
                                                                                                                                                           transgenic
                                                                                                                                                                             Terminal flower 1; tfl1; centroradialis;
                                                                                                                                                                                                               Arabidopsis
                                                                                                                                                                                                                                                   24'-JUN-1997
                                                                                                                                                                                                                                                                                     AAT60140;
                                                                                                                                                                                                                                                                                                                      AAT60140 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 522 BP; 147 A; 111 C; 129 G; 135 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention provides the nucleic acid and protein sequences of a number of proteins from the strawberry which are involved in the regulation of flowering. These were identified using primers based on the homologous sequences from A. thaliana, B. napus and R. sativus. They can be used in the production of transgenic field crops whose flowering is regulated and the time of fruiting and harvesting can be manipulated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                                                                                                                                             548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131 TAGATCAATCACTCTAAAGGTTACTTATGGCCAAAG----AGAGGTGACTAATGGCTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGGGAGGTGGTGAAATATGAAATGCCGAGGCCAAACATAGGGATCCACAGGTTTGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                           CAATGCCCAGAGGGAAACTGCTGCAAGAAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                           CAATTGTCAGAGGGAGGAGTGGCTGCGGAGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGACAGTCGAAAGTTTGCAGAAACAAACGAGTTCGGGCTTCCGGTGGCTGCTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTTTTGTTCAAACAGAAAGGTAGGCAGACAGTGATTCCTCCTTCCAAGGACCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAATGAGATTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGGAGCACTTGCACTGGATAGTCACGGACATCCCCAGGAACAACTGACAACACATTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCTTTCTTTACACTGGTCATGACTGACCCAGATGTTCCAGGTCCTAGTGATCCTTACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTATATCCTTCCTCTGTAACCGTCAAGCCTAAGGTTGAAGTTCATGGAGGCGATATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCCAGTGTTAAAATGACAGTGACTTACAACTCCAGCAAGAAGGTGTATAATGGGCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 59-60;
                                                                                                                                                             plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                          thaliana var. Columbia
                                                                                                                                                                                                             terminal flower1 (tfl1) cDNA
                                                                                                                                                                                                                                                 (first
                                                    /*tag=
   /note-
                   /*tag=
                                                                                        Location/Qualifiers
                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                      CDNA; 668
                                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21.1%;
b
"tfll-14 allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 180.2; DB Pred. No. 1.3e-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
   has
                                                                                                                                                                                                                                                                                                                                                                                                           518
                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                             cen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22; Length
   T at
                                                                                                                                                                           gene;
   position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
   221"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                γ
 δÃ
                                                                Ş
                                                                                                        밁
                                                                                                                                       Ş
                                                                                                                                                                             밁
                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                뭥
                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; Fig 6a; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1997-202235/18.
P-PSDB; AAW13945.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bradley DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (INNE-) INNES CENT JOHN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9710339-A1
   420
                                    322
                                                                      360
                                                                                                        262
                                                                                                                                          300
                                                                                                                                                                             202
                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                142
                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                    82
                                                                                                                                                                                                                                                                                                                                                                                         22
 GTCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGC---ACCAGGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                             308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carpenter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96WO-GB02276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           274
/*tag=
/note=
307
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d
"tf11-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                c
"tfl1-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "tf11-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Coen
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ES
```

```
A cDNA clone (AAT60140) codes for the terminal flower1 (TFL1) protein (AAW13945) of Arabidopsis thaliana. It was obtd. from an Arabidopsis expressed sequence tag, clone 129DT77. A genomic tfl1 clone (AAT60142) has also been obtd. The wild-type role of the tfl1 gene is to inhibit flowering and to prevent the apical meristem from switching to a floral fate. The tfl1 gene was identified as a homologue of the Antirrhinum centraradialis gene (see also AAT60141). The flowering characteristics of transgenic plants, esp. switching of apical meristem to a floral fate and the timing of flowering, can be manipulated by regulating cen or tfl1 gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 668 BP; 195 A; 135 C; 147 G; 191 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antirrhinum majus centroradialis gene and Arabidopsis homologue, Tfll - control switching of apical meristem to floral fate, usef in plant hybridisation and in control of growing season
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60 AAGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGTGGAGACGTTCTT 119
                                                                                                                                                                                                                                                                                   GACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAAC
                                                                                                                                                                                                                                                                                                                                                                                            GGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGAGTTGGTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATATGGGAACTAGAGTGATAGAGCCATTGATAATGGGGAGAGTGGTAGGAGATGTTCTT
                                                ACGTTTGGCAAAGAGGTGGTGAGCTATGAATTGCCAAGGCCAAGCATAGGGATACATAGG
                                                                                                 ACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGT
                                                                                                                                                       CCCTTTCTAAAAGAACACCTGCACTGGATCGTTACAAACATTCCCGGCACAACAGATGCT
                                                                                                                                                                                                          CCTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACA
                                                                                                                                                                                                                                                             GATCTCAGATCCTTCTTCACTTTGGTGATGATAGACCCAGATGTTCCAGGTCCTAGTGAC
                                                                                                                                                                                                                                                                                                                                                                 GGCCATGAGCTCTTTCCTTCTTCTTCTCCCCAAGCCTAGGGTTGAGATCCATGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTCTTCACTCCAACAACTAAGATGAATGTTAGTTATAACAAGAAGCAAGTCTCCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 176.8;
Pred. No. 8.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .8e-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     307"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      274"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
476
                                                                                                   419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        179
                                                   381
                                                                                                                                                       321
                                                                                                                                                                                                          359
                                                                                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                          261
                                                                                                                                                                                                                                                                                                                                                                    201
```

۲,

```
RESULT 10
ABK82093
ID
ABK82093
XX ABK82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
The invention describes a substantially purified or isolated polypeptide CC (I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as CC MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like CC proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) and HB-like proteins, or their functionally active fragments or variants. CC Nucleic acid (II) encoding (I), a construct (III) comprising (II), or a construct (III) comprising (II), or a construct for modifying plant life cycles and/or growth phases, flowering processes, flowering and/or plant a rchitecture and/or flower and/or inflorescence development in a plant, which involves introducing (II), (III) or (IV) into the plant. The CC which involves introducing (II), (III) or (IV) into the plant. The CC individual or simultaneous enhancement or downregulation of MADS-box gene activities may alter flower, embryo and seed development, e.g., cenhance or inhibit embryo differentiation and growth or alter flower CC organ identity through conversion of one floral organ in another. Manipulation of CEN or HB activity in plants alters the control of phase change, flowering time and the number of leaves made before flowering. Manipulation of AP2 activity in plants alters flower organ identity through conversion of one floral organ in another, leads to a change in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass fescue species, useful for controlling plant life cycles and/or growt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ryegrass; fescue; MADS-box; MADS; MADS-like protein; CENTRORADIALIS; CEN; CEN-like protein; APETALA2; AP2; AP2-like protein; HB; Homeo-box protein; HB-like protein; plant growth; plant architecture; inflorescence development; flower development; embryo development; seed development; flower organ identity; phase change; male sterility; hybrid seed production; herbage quality; early maturing crop; blomass increase; blocking flowering;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Spangenberg G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-OCT-2000; 2000AU-0000873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-OCT-2001; 2001WO-AU01311.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W0200233091-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lolium perenne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           allergenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel floral meristem identity gene LpCENa contig #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK82093 standard; cDNA; 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (AGRI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGATCACTTCAACACTCGTAAATTTGCGGTCGAGTATGATCTTGGTCTCCCTGTCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGTTTTCTACAATTGTCAGAGGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCGTCTTCTTTAACGCACAAAGAGAAA 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGRESEARCH LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGRIC VICTORIA SERVICES PTY LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sawbridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            290pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                floral meristem identity protein; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Emmerling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ő
```

RESULT ABK8209 ID AB XX AC AB XX DT 27 DT 27 CX DY 27 KW CR KW CR KW HC KW HC KW Se KW bi

DNA encoding novel floral meristem identity protein LpCENa

27-AUG-2002

(first entry)

ABK82091;

ABK82091 standard;

cDNA; 792

ВP

seed development; flower organ identity; phase change; male sterility; hybrid seed production; herbage quality; early maturing crop; biomass increase; branching increase; blocking flowering;

Ryegrass; fescue; MADS-DOX; MADS; MADS-LINE protein; HB: CEN; CEN-like protein; APETALA2; AP2; AP2-like protein; HB architections plant growth; plant architectinflorescence development; flower development; embryo development inflorescence development; flower development inflorescence development; flower development inflorescence development; flower development inflorescence development; flower development inflorescence develop

CENTRORADIALIS; architecture;

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δδ
                                                                                                                                                           밁
                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                      QY
                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
밁
                                   Ş
                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  size e.g. shorter plant stature; and in blocking flowering and reducing release for allergenic pollen. This sequence represents a contig polynucleotide novel floral meristem identity protein involved in floral development and a potential target for manipulating plant life cycles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             architecture for enhancing value of ornamentals; delaying flowering in forage grasses thus stopping the formation of less digestible stems and increasing herbage quality; altering flowering time allowing early maturing crops; delaying vegetative phase to increase blomass production; increasing branching to enhanced business in fruit trees; altering plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the number of floral organs and flowering architecture. Manipulation of flowering plant architecture has a wide range of applications such as: inducing male sterility for hybrid seed production; changing flower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 762 BP;
                                                                             523
                                                                                                                                                           463
                                                                                                                                                                                                                                           403
                                                                                                                                                                                                                                                                                                                       343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  103
                                                                                                                                                                                                                                                                                                                                                               318
                                                                                                                                                                                                                                                                                                                                                                                                         283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81. GACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCAATC 140
                                                                             CAGTTTGCTGTGGATAATGATCTTGGCCTCCCTGTGGCTGCTGTTTACTTCAATTGTCAG
                                                                                                                                                           AAGCAGAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGC
                                                                                                                                                                                                                                                                               GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT
                                                                                                                                                                                                                                                                                                                                                               CTCCATTGGTTGGTGACTATCCCTGCTACAACTGGAAACCTTTGGCAATGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGAC---TAATGGCTTGGATCTAAGGCCT 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCCTCTTATTGTTGGTCGTGTCATTGGAGAAGTTCTCGATCCATTTAACCCATGTGTG 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                312;
AGAGAGACTGCTGCCAGGAGGCGCTGAAAATCGAGTTCTT
                                   AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTT 597
                                                                                                                   GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                                   CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                                                                                                                                                                                         ATGAGCTATGAGAGCCCAAAGCCCCAACATTGGAATCCACAGGTTCATTTTTGTGCTCTTC
                                                                                                                                                                                                                                                                                                                       ACATTGGTTATGGCGGACCCAGATGTGCCAGGACCAAGTGATCCGTATCTGCGGGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTITIGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGCAGTTGTATCTAAACCAAGAGTAGAGGTTCAGGGGGGGTGACTTGCGATCCTTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188 A; 178 C; 176 G; 220 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 176; DB 24; Pred. No. 1.4e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                 437
                                                                             582
                                                                                                                                                                                                   497
                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                               377
                                                                                                                                                                                                                                                                                                                                                                                                         342
                                                                                                                                                                                                                                                                                                                                                                                                                                             317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          257
                                                                                                                   557
                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲.
```

```
Ş
                                    밁
                                                        . 6
                                                                                                       밁
                                                                                                                                        Š
                                                                                                                                                                                                                                                   The invention describes a substantially purified or isolated polypeptide CC (I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as CC MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like CC proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) CC and HB-like proteins, or their functionally active fragments or variants: CC vector (IV) comprising (II), is useful for modifying plant life cycles architecture and/or flower and/or inflorescence development in a plant, CC which involves introducing (II), or (III) or (IV) into the plant. The CC individual or simultaneous enhancement or downregulation of MADS-box CC gene activities may alter flower, embryo and seed development, e.g., CC enhance or inhibit embryo differentiation and growth or alter flower CC organ identity through conversion of one floral organ in another.

CC Manipulation of CEN or HB activity in plants alters the control of phase C change, flowering time and the number of leaves made before flowering. CC through conversion of one floral organ in another, leads to a change in the number of floral organs and flowering architecture. Manipulation of CC inducing male sterility for hybrid seed production; changing flower architecture for enhancing value of ornamentals; delaying flowering in Groreasing herbage quality; altering flowering time allowing early conversing branching to enhanced business in fruit trees; altering plant conversion involved in floral development and a potential cc maristem identity protein involved in floral development and a potential cc target for manipulation plant life cycles.
                                                                                                                                                                            Matches
                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass or fescue species, useful for controlling plant life cycles and/or growth
                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 4; Fig 30; 290pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Spangenberg G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-OCT-2001; 2001WO-AU01311.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          allergenic pollen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; ABG60933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (AGRI-) AGRIC VICTORIA SERVICES PTY (AGRE-) AGRESEARCH LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-OCT-2000; 2000AU-0000873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200233091-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lolium
     198
                                       166
                                                                                                           106
                                                                                                                                             81
                                                                                                                                                                                            Local Similarity
                                                                                                       GACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCAATC 140
TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT
                                  AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCA
                                                                     ACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGAC---TAATGGCTTGGATCTAAGGCCT 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002-452388/48
                                                                                                                                                                                                                                                                                  for manipulating plant life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       perenne
                                                                                                                                                                                                                                                 792 BP;
                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sawbridge
                                                                                                                                                                                                                                               196 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        floral meristem identity protein; gene;
                                                                                                                                                                                            20.6%;
                                                                                                                                                                                                                                                 181 C; 181 G; 232 T; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TI,
                                                                                                                                                                            0,
                                                                                                                                                                                           Score 176; DB 24;
Pred. No. 1.4e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ong
                                                                                                                                                                              Mismatches
                                                                                                                                                                                         No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EK,
                                                                                                                                                                                                                                                                                    cycles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Emmerling
                                                                                                                                                                                                                                                 other;
                                                                                                                                                                                                           Length 792;
                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SS
                                                                                                                                                                            ω
--
                                                                                                                                                                          Gaps
                                                                                                         165
 257
                                    225
```

```
RESULT 12
ABK82092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                   (AGRI-)
                                                                                                                                                                                                                                                                       New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass fescue species, useful for controlling plant life cycles and/or growt
                                                                                                                                                                  19-OCT-2000; 2000AU-0000873
                                                                                               WPI;
                                                                                                                Spangenberg G,
                                                                                                                                                                                   17-OCT-2001; 2001WO-AU01311
                                                                                                                                                                                                                         WO200233091-A1
                                                                                                                                                                                                                                                               allergenic
                                                                                                                                                                                                                                                                                                                                                    Novel floral meristem identity gene LpCENa contig #1.
                                                                                                                                                                                                                                                                                                                                                                        27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                            ABK82092;
                                                                                                                                                                                                                                                                                                                                                                                                              ABK82092 standard;
                                                                                                                                                                                                                                             Lolium perenne
                                                                                                                                                                                                                                                                                                                                                                                                                                                              586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGGAACAACCTTTGGCAATGAGATT
                                                                                              2002-452388/48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAGAGACTGCTGCCAGGAGGCGCTGAAAATCGAGTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGTTTGCTGTGGATAATGATCTTGGCCTCCCTGTGGCTGCTGTTTACTTCAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCAGAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGAGCTATGAGAGCCCCAAAGCCCCAACATTGGAATCCACAGGTTCATTTTTGTGCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATTGGTTATGGCGGACCCAGATGTGCCAGGACCAAGTGATCCGTATCTGCGGGAGCAT
                                                                                                                                    AGRIC VICTORIA SERVICES AGRESEARCH LTD.
                                                                                                                                                                                                                                                               pollen;
                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                 Sawbridge TI,
                                                                                                                                                                                                                                                                                                                                                                                                               CDNA;
                                                                                                                                                                                                                                                               oranching increase; floral meristem id
                                                                                                                                                                                                                                                                                                                                                                                                               792
                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                 ong
                                                                                                                                              DIY LID
                                                                                                                                                                                                                                                               identity
                                                                                                                 EK,
                                                                                                                 Emmerling
                                                                                                                                                                                                                                                               protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                              625
                                                       grass or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  285
```

The invention describes a substantially purified or (I) from a ryegrass (Lolium $\operatorname{sp.}$) or fescue (Festuca

sp.) species, such a

as

Claim 4; Fig 32; 290pp; English

```
Qγ
                                                                                                                                                                                               밁
                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                 밁
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                    Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC proteins, APEDALAA (APZ) and APZ-like proteins, HOLLING (CEM) and HB-like proteins, or their functionally active fragments or variants. CC Nucleic acid (II) encoding (I), a construct (II) comprising (II), or a construct (III) comprising (III), or a construct (III) plant (III) protesses, flowering plant life cycles (III) construction and/or plant. The construction involves introducing (II), (III) or (IV) into the plant. The construction of construction of construction of construction of construction of construction and growth or alter flower corgan identity through conversion of one floral organ in another. CC change, flowering time and the number of leaves made before flowering. CC Manipulation of AP2 activity in plants alters flower organ identity construction of construction construction. Leads to a change in the number of floral organ in another, leads to a change in the number of flowering architecture. Manipulation of construction of co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 development
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              226
586
                                                                                                                                                                                                                                                                                                                                                                                                         346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198 TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             106 GAGCCTCTTATTGTTGGTCGTGTCATTGGAGAAGTTCTCGATCCATTTAACCCATGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81 GACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCAATC 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 312; Conserv
AGAGAGACTGCCAGGAGGCGCTGAAAATCGAGTTCTT
                                               AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTT
                                                                                                 CAGTTTGCTGTGGATAATGATCTTGGCCTCCCTGTTGGCTGTTTTACTTCAATTGTCAG
                                                                                                                                           GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                                  AAGCAGAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGC
                                                                                                                                                                                                                                                   CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                                                                                                                                                                                                                                                     ATGAGCTATGAGAGCCCAAAGCCCAACATTGGAATCCACAGGTTCATTTTTGTGCTCTTC
                                                                                                                                                                                                                                                                                                                                               CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGCAGTTGTATCTAAACCAAGAGTAGAGGTTCAGGGGGGGTGACTTGCGATCCTTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGAC---TAATGGCTTGGATCTAAGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATTGGTTATGGCGGACCCAGATGTGCCAGGACCAAGTGATCCGTATCTGCGGGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  792 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            novel floral meristem identity protein involved in flow
a potential target for manipulating plant life cycles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; 181 C; 182 G; 231 T; 2 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 176; DB 24;
Pred. No. 1.4e-31;
0; Mismatches 205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205;
625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              u
٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                        377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             165
                                                                                                                                                557
                                                                                                                                                                                                                                                   497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          257
                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                     465
```

```
ABK82122
XX
XX
ABK8
XXX
ABK8
XXX
ABK8
XXX
DNA
XXX
CRYS
KW CRYS
KW HOM
KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             autrorescence development; flower development; embryo development; seed development; flower organ identity; phase change; male sterility; hybrid seed production; herbage quality; early maturing crop; biomass increase; branching increase; blocking flowering; allergenic pollen; floral meristem identity protein; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABK82122 standard; cDNA; 1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Spangenberg G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (AGRE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (AGRI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-OCT-2000; 2000AU-0000873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-OCT-2001; 2001WO-AU01311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200233091-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lolium perenne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homeo-box protein; HB-like protein; plant growth; plant architecture; inflorescence development; flower development; embryo development;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ryegrass; fescue; MADS-box; MADS; MADS-like protein; CENTRORADIALIS; CEN, CEN-like protein; APETALA2; AP2; AP2-like protein; HB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding novel floral meristem identity protein LpCen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABK82122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGRIC VICTORIA SERVICES PTY LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGRESEARCH LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sawbridge TI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Emmerling M;
```

New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass fescue species, useful for controlling plant life cycles and/or growt phases

Claim 4; Fig 49; 290pp; English.

The invention describes a substantially purified or isolated polypeptide C(I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as CC MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like CC MADS-like proteins, Homeo-box proteins (HB) comprising (II), and APZ-like proteins, Homeo-box proteins (HB) comprising (II), a construct (III) comprising (III), or a construct (III) comprising (III), is useful for modifying plant life cycles comprising (III), is useful for modifying plant. The conditionally active and/or plant. The conditional comprising (III), or a construct (III) comprising (III), or a construct (III) comprising (III), or a construct (III) comprising plant. The conditional control comprising (III), is useful for modifying plant life cycles conditional conditional comprision (III) or (IV) into the plant. The conditional conversion of one floral organ in another. Companies and identity in plants alters the control of phase change, flowering time and the number of leads to a change in the number of floral organs and flowering architecture. Manipulation of the conditional condi meristem identity protein involved target for manipulating plant life in floral cycles. development potentia

Ş

Or.

```
RESULT 14
ABK82094
ID ABK82094
XX ABK82094
AC ABK82
XX YOUNG
AC ABK82
XX RYGGI
KW CEN;
KW CEN;
KW HOMEE
KW HOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Natches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                    Ryegrass; fescue: MADS-box; MADS: MADS-like protein; CENTRORADIALIS; CEN: CEN-like protein; APETALA2; AP2; AP2-like protein; HB; Homeo-box protein; HB-like protein; Plant growth; plant architecture; inflorescence development; flower development; embryo development; seed development; flower organ identity; phase change; male sterility; bybrid seed production; herbage quality; early maturing crop; blomass increase; branching increase; blocking flowering;
                          19-OCT-2000;
                                                                          17-OCT-2001;
                                                                                                                               25-APR-2002
                                                                                                                                                                            WO200233091-A1
                                                                                                                                                                                                                                    LOT TOT
                                                                                                                                                                                                                                                                                    allergenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel floral meristem identity gene LpCENa contig #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27 - AUG - 2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK82094;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABK82094 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGACAGCTTGGCAGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCCTCTTATTGTTGGTCGTGTCATTGGAGAAGTTCTCGATCCATTTAACCCATGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCAATC 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGTTTGCTGTGGATAATGATCTTGGCCTCCCTGTGGCTGCTGTTTACTTCAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGAGACTGCTGCCAGGAGGCGCTGAAAATCGAGTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCAGAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGAGCTATGAGAGCCCAAAGCCCAACATTGGAATCCACAGGTTCATTTTTGTGCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACATTGGTTATGGCGGACCCAGATGTGCCAGGACCAAGTGATCCGTATCTGCGGGAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCCACCTCCGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGCAGTTGTATCTAAACCAAGAGTAGAGGTTCAGGGGGGGTGACTTGCGATCCTTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGAC---TAATGGCTTGGATCTAAGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 Similarity
312; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1225
                                                                                                                                                                                                                                                                               pollen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                          2000AU-0000873
                                                                             2001WO-AU01311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388 A; 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 176;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۳
```

Query Match Best Local s Matches

Similarity

20.4%;

Conservative

0;

Score 175; DB 24; Pred. No. 2.4e-31; 0; Mismatches 206;

Length Indels

ω --

Gaps

1;

141

106

81 GACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCAATC 140

ACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGAC---TAATGGCTTGGATCTAAGGCCT 197 GAGCCTCTTATTGTTGGTCGTGTCATTGGAGAAGTTCTCGATCCATTTAACCCATGTGTG 165

AAGATGGTAGCAACCTATAACTCAAACAAGCTGGTCTTCAATGGTCATGAGCTCTACCCA

TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT

257

ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT TCAGCAGTTGTATCTAAACCAAGAGTAGAGGTTCAGGGGGGGTGACTTGCGATCCTTATTC

345 317 Sequence

787

BP; 194 A; 180 C; 179 G; 228 T; 6 other;

S 밁 ρy В ρy 밁 Q 밁 Ş В Ş

378

GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT

437

CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATT

346

318 286 258 226 198 166

```
cc and HB-like proteins, or their functionally active fragments or variants.

cc Nucleic acid (II) encoding (I), a construct (III) comprising (II), or a construct (III) comprising (III), or a construct (III) comprising plant life cycles cand/or growth phases, flowering processes, flowering and/or plant construction of the plant.

cc and/or growth phases, flowering processes, flowering and/or plant in a plant, which involves introducing (III), (III) or (IV) into the plant. The conditional construction of simultaneous enhancement or downregulation of ADS-box companidantity through conversion of one floral organ in another.

cc enhance or inhibit embryo differentiation and growth or alter flower corgan identity through conversion of one floral organ in another.

cc Manipulation of CEN or HB activity in plants alters the control of phase contains flowering time and the number of leaves made before flowering.

cc Manipulation of AP2 activity in plants alters flower organ identity through conversion of one floral organ in another. leads to a change in the number of floral organs and flowering architecture. Manipulation of construction and flowering architecture. Manipulation of construction and flowering architecture.
                                                                              flowering plant architecture has a wide range of applications such as: inducing male sterility for hybrid seed production; changing flower architecture for enhancing value of ornamentals; delaying flowering in forage grasses thus stopping the formation of less digestible stems and increasing herbage quality; altering flowering time allowing early maturing crops; delaying vegetative phase to increase blomass production; increasing branching to enhanced business in fruit trees; altering plant size e.g. shorter plant stature; and in blocking flowering and reducing release for allergenic pollen. This sequence represents a contig polynucleotide novel floral meristen identity protein involved in floral development and appropriate terms of the manifest for an involved in floral development and appropriate terms of the manifest and appropriate and appropriate terms.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                          development and a potential target for manipulating plant life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention describes a substantially purified or isolated polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass or fescue species, useful for controlling plant life cycles and/or growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (AGRI-) AGRIC VICTORIA SERVICES (AGRE-) AGRESEARCH LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-452388/48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fig 32; 290pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sawbridge TI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            γŢq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Emmerling
                                                             cycles.
```

```
RESULT 15
AAC90668
ID AAC90
XX
   밁
                            δÃ
                                                           В
                                                                                    Qy
                                                                                                                                                                                 PXX PXX OS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                       Matches
                                                                                                                                                   Query Match
                                                                                                                                                                                                         The present invention provides the nucleic acid and protein sequences of a number of proteins from the strawberry which are involved in the regulation of flowering. These were identified using primers based on the homologous sequences from A. thaliana, B. napus and R. sativus. They can be used in the production of transgenic field crops whose flowering is regulated and the time of fruiting and harvesting can be manipulated.
                                                                                                                                                                                                                                                                                                                                                 Novel nucleic acid involved in controlling plant flowering processes useful for generating transgenic plants, in particular strawberry plants having altered flowering behavior such as early, delayed or day-neutral flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oeller P, Gutterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strawberry; flowering regulation; harvesting; fruit production; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAC90668 standard; cDNA; 519
                                                                                                                                                                              Sequence 519 BP; 143 A; 132 C; 120 G; 124 T; 0 other;
                                                                                                                                                                                                                                                                                                                     Claim 23; Page 94-95; 97pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAB50271.
                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-025165/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-MAY-1999; 99US-0318789
24-MAY-2000; 2000US-0318789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-MAY-2000; 2000WO-US14297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200071722-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fragaria vesca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strawberry flowering regulation protein coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAC90668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (DNAP ) DNA PLANT TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             526 CAGTTTGCTGTGGATAATGATCTTGGCCTCCCTGTGGCTGCTGTTTACTTCAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              498
                             131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466 AAGCANAAGCGAAGGCAGACTGTATCTGTGCCTTCCTTCAGGGATCATTTCAACACCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 406 ATGAGCTATGAGAGCCCAAAGCCCAACATTGGAATCCACAGGTTCATTTTTGTGCTCTTC
   66
                                                                                         71
                                                                                                                                  Match 18.8%;
Local Similarity 57.9%;
                                                             6
                            TAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGCTTGGATCT 190
                                                                         AAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAA 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
CCCCACTACAAAAATGATTGTCTCTTACAACAGCAAGCTCGTCTGCAATGGACATGAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAGAGACTGCTGCCAGGAGGCGCTGAAAATCGAGTTCTT
                                                          AAGAATGTCGGAACCTCTAGCTGTTGGAAGAGTCATAGGAGATGTTCTTGATTCCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTT 597
                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           z
                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                    Score 161.2;
Pred. No. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORP.
                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   floral homeotic gene;
                                                                                                                     3.6e-28;
ches 208;
                                                                                                                                                DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     625
                                                                                                                       Indels
                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  field crop;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO: 43
                                                                                                                                                   519;
                                                                                                                     0;
                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       497
                                                          65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   465
                                                                                                                                                                                                                                                                                                                                                                                               š
                                                                                                                     0
```

Search completed: May Job time: 289.5 secs

2, 2003, 10:45:30

```
δÃ
                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                        멍
                       Qγ
                                                   В
                                                                         QΥ
                                                                                                       망
                                                                                                                              Ş
                                                                                                                                                            В
                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                               Qγ
밁
                                                                                                                                                                                                                                                                                                                      486
                                                    426
                                                                              491
                                                                                                        366
                                                                                                                                                             306
                                                                                                                                                                                     371
                                                                                                                                                                                                                 246
                                                                                                                                                                                                                                                                    186
                                                                                                                                 431
                                                                                                                                                                          TGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTAT
               TTGTCAGAGGGAGA 564
                                                                     CACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAA
                                                                                                       TCTCTTCATGCAAAAACGAAGGCAGTCGGTGAACCCGCCTTCCTCAAGGGATCACTTCAA
                                                                                                                         ATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAA 490
                                                                                                                                                                                                                             AGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGGCAA 370
                                                                                                                                                                                                                                                                                    CTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCG
TGCACAGAGAGAAA
                                                    CACCCGAACCTTCGCAGCCGAAAACGACCTTGGTGTTCCTGTTGCTGCCGTTTACTTCAA
                                                                                                                                                            AGAAGTGGTGAGCTACGAGATGCCAAGGCCAAACATAGGCATCCACAGGTTTGTGTTTGT
                                                                                                                                                                                                                                                                    ATTCTTCACTCTGGTAATGACAGACCCAGATGTTCCTGGCCCTAGTGATCCTTATTTGAA
                                                                                                                                                                                                               AGAGCACCTGCACTGGATTGTGACAGACATTCCTGGCACCACAGATGCTACATTTGGAAG
499
                                                    485
                                                                              550
                                                                                                       425
                                                                                                                                                                                     430
                                                                                                                                                                                                                                                                                               310
                                                                                                                                                                                                                                                                                                                         185
                                                                                                                                                             365
                                                                                                                                                                                                                 305
```

•						
r u `	·		٠.	·.		
					·	
				,		
		•				
					•	
					٠.	

```
Title:
Perfect score:
Sequence:
                                                                                           Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                     000
                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                  516.4
                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-845-849-1
856
1 tctagaactagtgg
                                                                                         Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                May 2, 2003, 05:54:34; Search time 1783.5 Seconds (without alignments) 7773.107 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16154066 segs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC Gapop 10.0 , Gapext 1.0
   60.3
57.7
49.4
27.3
27.1
24.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.5 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                 em_estom:*
gb_gs::*
em_gss_inv:*
em_gss_inv:*
em_gss_pin:*
em_gss_vrt:*
em_gss_vrt:*
em_gss_mam:*
em_gss_mam:*
em_gss_mam:*
em_gss_mam:*
em_gss_mam:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_esthum: * em_estin: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_estro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_estov:*
                                                                                                                                                                                                       em_gss_rod:*
                                                                                                                                                                                                                                                                                                                                                                                                                gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                      gb_est4:*
                                                                                                                                                                                                                                                                                                                                                                                                    gb_est3:*
                                                                                                                                                                                                                                                                                                                                                                                                                           gb_est2:*
                                                                                                                                                                                                                                                                                                                                                                          jb_est5:*
   518
494
423
551
659
206
  10
10
14
14
                                                                                           IJ
  AV563203
AV562377
AV788551
BE590867
BQ797327
AV560420
                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32308132
AV563203 AV563203
AV562377 AV582377
AV788551 AV788551
BE590867 WHE0855_1
BQ797327 EST 6265
AV560420 AV560420
                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                               C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ဂ ဂ
```

4 4 4 5 4	442	3 9	38	2 σ 2 ω	35	ω u 4	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7
101.6 101.4 101.4	103.2	113.2	113.8	115.6	116.2	122.6	127.2	127.6	131.2	132.6	136.8	139	139.4	140.8	141	142.2	14	٥.	0	151.2		2	4	7	σ	66.		18	4	96.	198.4	9
11.9 11.8 11.8				•			•	•	•		•		16.3		16.5		•			•			•	•	•	•	•		•	•	•	•
341 522 627	586	682	357	337	463	587 687	558	543	478	383	545	456	580	432	459	773	574	520	395	528	574	572	476	597	671	498	718	781	542	491	505	O.
13 10 17	12	13	13	13	10	13	13	10	10	10	13	10	13	10	9	17	12	10	17	14	13	13	14	13	13	13	13	12	10	12	10	11
BI750810 AW981994 AQ289409		H	BI941606	BI751372	W70714	144654 B1679012	BI426705	601	AW684071	AW927655	вJ212200	AW684982	Ĥ.		سِ	Ξ	Ħ	BE602964	Ξ	BM814255	Ž	BJ461322	во518869	вJ315664	BJ448552	вJ453783	BM407295	BG647258	AV937451	BF483056	BE498304	
50810 81994 89409	BG463850 EM1_51_F0 BG463850 sak20h06.	1311589	φ >	51372 Ta01_16	W707147 ski	T44654 /91/ Lambda RT679012 SWS1055 S	1426705 sag	267_	1G04	AW927655 945014B02	220C	3H07	70A0	BE319228 NF015E08R	5D07	N29T	F259482	E602964 HVSMEh01	58079 BOGFM69T	14255 EST5923	56274 BJ45627	J461322 BJ461322	518869 EST6262	J315664 BJ31566	448552 BJ44855	53783 BJ453783	407295 EST58162	4725	37451 AV93745	F483056 WHE2314_	E498304 WHE0963	49 Zea ma

ALIGNMENTS

20	5 <u>-</u> C	03 1				••															
	FEATURES Source		COMMENT	MEDLINE	JOURNAL		TITLE	AUTHORS	REFERENCE			ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION		DEFINITION	LOCUS	RESULT 1 AV563203/c	
/organism="Arabidopsis thaliana" /strain="Columbia"	<pre>Lmail: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/. Location/Qualifiers 1. 518</pre>	The First Laboratory for Plant Gene Research Kazusa DNA Research Institute Yana 1532-3, Kisarazu, Chiba 292-0812, Japan	Contact: Erika Asamizu	20363093	DNA Res. 7, 175-180 (2000)	of 12,028 non-redundant expressed sequence tags from normalized and size-selected cDNA libraries	A large scale analysis of cDNA in Arabidopsis thaliana: Generation	Asamizu, E., Nakamura, Y., Sato, S. and Tabata, S.	1 (bases 1 to 518)	Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;	Arabidopsis thaliana	thale cress.	EST.	AV563203.1 GI:8734629 .	AV563203	thaliana cDNA clone SQ183b01F 3', mRNA sequence.	AV563203 Arabidopsis thaliana green siliques Columbia Arabidopsis	AV563203 518 bp mrna linear EST 07-SEP-2000		

```
ACCESSION
VERSION
KEYWORDS
                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                              RESULT 2
AV562377/c
                         COMMENT
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE CO
                                                                                                                                                                            SOURCE
                                     JOURNAL
MEDLINE
                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity Matches 517; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                  158
                                                                                                                                                                                                                                                                                                                                                                                                                                         672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        312 GAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACCTTTGGCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278
                                                                                                                                                                                                                                                                                                                                                                 98
                                                                                                                                                                                                                                                                                                                 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATTATATTAATCTACATGAAATGAAGTGTTATATTTA 829
                                                                                                                                                                                                                                                                                                                                                             AATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAATTTAATAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCCTTTATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTTCTACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAATATCTCCATTGGTTGGTGACTGATATCCCTGCTGCAACTGGAACAACCTTTGGCAAT 459
                                                                                                                                                                                                                                                                                                               AATTATATTAATCTACATGAAATGAAGTGTTATATTTA 1
                                                                                                                                                                                                                                                                                                                                                                                       AATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTGTGTGATGCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCCTTTATAACC
            The
                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                               AV562377
AV562377 Arabidopsis
thaliana cDNA clone s
AV562377
                                     DNA Res. 7, 175-180 (2000) 20363093
                                                           Asamizu, E., Nakamura, Y., Sato, S. and Tabata, S.
A large scale analysis of cDNA in Arabidopsis thaliana: Generation of 12,028 non-redundant expressed sequence tags from normalized and size-selected cDNA libraries
                                                                                                                                                              Arabidopsis thaliana
                                                                                                                                                                                       AV562377.1
EST.
                         Contact: Erika Asamizu
                                                                                                                                                                            thale cress.
First Laboratory usa DNA Research J
                                                                                                            (bases 1 to 494)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Arabidopsis thaliana green siliques
/tissue_type="green siliques"
/note="Vector: pBluescriptII SK-; Site_1: EcoRI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:3702"
/clone="SQ183b01F"
                                                                                                                                                                                                   GI:8733803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                         s thaliana
SQ169b07F
 Institute
           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 516.4;
Pred. No. 1.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85
           Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                      494 bp mRNA linear EST 07-SEP-201
iana green siliques Columbia Arabidopsis
b07F 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ø
            Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .9e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
            Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EcoRI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                   07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       671
                                                                                                                                                                                                                                                                                                                                                                                       791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     371
                                                                                                                                                                                                                                                                                                                                                                 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                               159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
```

```
RESULT 3
AV788551/c
LOCUS
                      REFERENCE
AUTHORS
                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                        οy
                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                      SOURCE
                                                                                                                       ACCESSION
                                                                                                                                           DEFINITION
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 494
                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                           314
                                                                                                                                                                                                                               815 GAAGTGTTATATTT 828
                                                                                                                                                                                                                                                                          755
                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                   695
                                                                                                                                                                                                                                                                                                                                        194
                                                                                                                                                                                                                                                                                                                                                             635
                                                                                                                                                                                                                                                                                                                                                                                 254
                                                                                                                                                                                                                                                                                                                                                                                                       575
                                                                                                                                                                                                                                                                                                                                                                                                                                               515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     494 TGATATCCCTGCTACAACTGGAACAACCTTTGGCAA,TGAGATTGTGTGTTACGAAAATCC
                                                                                                                                                                                                          14
                                                                                                                                                                                                                                                     74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                     GAAGTGTTATATTT
                                                                                                                                                                                                                                                                AATGAGAGTGTTTTACTTATATAGTGTGTGTGATGCGATAATTATATTAATCTACATGAAAT
                                                                                                                                                                                                                                                                                              GTGATGATGCCTATAGTAGTTCAATATATAAGTGTGTAATAAAAATGAGAGGGGGAGGAA
                                                                                                                                                                                                                                                                                                       GTGATGATGCCTATAGTAGTTCAATATATAAGTGTGTAATAAAAATGAGAGGGGGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                 AACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCC 394
                                                                                                                                                                                                                                                     AATGAGAGTGTTTTACTTATATAGTGTGTGATGCGATAATTATATTAATCTACATGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                     AGGAAGAAGACTTTAGATGGCTTCTTTCTTATAACCAATTGATATTGCATACTCTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seki,M., Narusaka,M., Ishida,J., Kamiya,A., Oono,Y., Sakurai,T., Carninci,P., Kawai,J., Arakawa,T., Shibata,K., Shinagawa,A., Muram
                                                                                                  EST
                                                                                                           AV788551
AV788551.1
                                                                                                                                       AV788551 RAFL6 Arabidopsis
                                                                                      thale cress.
                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1532-3, Kisarazu, Chiba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XhoI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="Arabidopsis thaliana 
/tissue_type="green siliques"
/note="Vector: pBluescriptII SK-;
/note="Vector: pBluescriptII SK-;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Arabidopsis
/strain="Columbia"
/db_xref="taxon:3702"
/clone="SQ169b07F"
                                                                                                            GI:19807341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 494; DB 10;
Pred. No. 1.4e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                           thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     292-0812, Japan URL:http://www.kazusa.or.jp/en/plant/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       thaliana"
                                                                                                                                           cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            green
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
           Itoh, M.,
                      Satou, M.,
                                                                                                                                            RAFL06-80-B19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            siliques
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EcoRI;
             Ishii,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                      Nakajima, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Site_2:
                                                                                                                                                                                                                                                     15
                                                                                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                                                                  754
                                                                                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                           694
                                                                                                                                                                                                                                                                                                                                                                                  195
                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                                                                                                                                                                                           255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

Muramatsu, M.,

Hayashizaki,Y

```
RESULT 4
BE590867
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                       Db.
                                                                                                        g
                                                                                                                              Š
                                                                                                                                                      밁
                                                                                                                                                                                δÃ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                562 AGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCCTTTATAACCAATTGATAAT 621
                                                                                                                                  802
                                                                                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                                   502 TIGCIGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                         363 AGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      382 GTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTTTCGAC 441
                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                        w
                                                                                                                                                       CGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATATATAAGTGTGTAATAAAAATG 741
                                                                                                                                                                                                          AGAGTGGCTGCGGAGGAAGAACTTTAGATGGCTTCTTCCTTTATAACCAATTGATATT
                                                                                                                                                                                                                                                                                                                                                                    TTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGT 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTTCGAC 364
                                                                                                        ATC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423;
WHE0855_CO1_E01ZS Wheat 20-45 DAP spike cDNA library aestivum cDNA clone WHE0855_CO1_E01, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Shinozaki,K.
Large scale analysis of Arabidopsis full-length cDNA (2002b)
Unpublished (2002)
Contact: Motoaki Seki
Plant Functional Genomics Research Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: mseki@rtc.riken.go.jp
An Arabidopsis full-length cDNA library was constructed essentially
as reported previously (Seki et al., 1998). This clone is in a
modified pBluescript vector as a SstI/XhoI insert. Please visit our
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIKEN Genomic Sciences Center
3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074,
Tel: 81-298-36-4359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: 81-298-36-9060
                                                                                                                                 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Site_1: SstI; Site_2: dehydration (1, 2, 5, 10, 24 hr) treatments" 99 c 70 g 123 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_stage="plants at various developmental stages germination to mature seeds" /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Arabidopsis thaliana"
/db_xref="taxon:3702"
/clone="RAFL06-80-B19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (http://www.gsc.riken.go.jp/e/plant/index _e.html) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="RAFL6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 423; DB 10; pred. No. 2.4e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        XhoI;
hr) ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       I; subjected and cold (1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                              561
                                                                                                                                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
           Š
                                     망
                                                           δÃ
                                                                                        뮹
                                                                                                               δÃ
                                                                                                                                         В
                                                                                                                                                                  Ş
                                                                                                                                                                                               멍
                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                               145
                                                                                                                                                                                                                         138
                                                                                         265
                                                                                                                  258
                                                                                                                                            205
                                                                                                                                                                     198
                                                                                                                                                                                                                                                   85
                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                      106
```

```
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78 AGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCA 137
  GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT 437
                                                                                                                                             CTCCATTGGTTGGTGACTGTATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATT 377
                                                                                                                                                                                                     ACACTCGTGATGGTAGACCCAGATGCTCCAAGTCCAAGCGATCCCAACCTTAGGGAGTAT 324
                                                                                                                                                                                                                                     ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCCTCCGAGAATAT 317
                                                                                                                                                                                                                                                                                                              TCCATGGTCGCCCAGCAGCCCAGGGTTGAGGTGGGCGGCCAATGAGATGAGGACCTTCTAC 264
                                                                                                                                                                                                                                                                                                                                                                                                                              ACCAACCTCAGGGTGACCTTCGGGAACAGGACCGTGTCCAACGGCTGCGAGCTCAAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCCT 197
                                                                                     CTCCACTGGCTTGTGACAGATATCCCCCGGTACAACTGGTGCATCCTTCGGGCAGGAGGTG 384
                                                                                                                                                                                                                                                                                                                                                     TCTCAGGTTCAAAACAAGCCAAGAGTTGAGAATTGGTGGAGAAGACCTCAGGAACTTCTAT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGACCCGCTGGTGGCTGGCAGGGTTGTGGGGGGACGTGCTGGACCCCTTCATCCGGACC 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Anderson,O.D., Chao,S., Choi,D.W., Close,T.J., F., P.S., Hsia,C.C., Kang,Y., Lazo,G.R., Miller,R., Seaton,C.L. and Tong,J.C.
The structure and function of the expressed port genomes - 20-25 DAP spike cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  quality sequence with phred score
Seq primer: Stratagene SK primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: oandersn@pw.usda.gov
Email: oandersn@pw.usda.gov
Sequence have been trimmed to remove vector sequence and low
Sequence have been trimmed score less than 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Olin Anderson
US Department of Agriculture, Agriculture R
West Area, Western Regional Research Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae; Triticeae; Triticeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          800 Buchanan Street, Albany, CA 94710, USA Tel: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE590867.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 5105595818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 551)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-"Vector: Lambda Uni-ZAP XR, excised phagemid; Site_1: ECORI; Site_2: XhoI; Plants were grown in the greenhouse. Spikes at 20 DAP and seeds at 30 to 45 DAP were harvested, total RNA and poly(A) RNA were prepared, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside. Plasmid DNA preparations and DNA sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="Spike and seed"
/dev_stage="ndm"+--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cultivar="Chinese Spring"
/db_xref="taxon:4565"
/clone="WHE0855_C01_E01"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       were performed in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="Adult plant"
/lab_host="E. coli SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Triticum aestivum'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27.3%;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 234; DB 10;
Pred. No. 6.2e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d DNA preparations and DNA sequencing the OD Anderson lab (all other authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Agriculture Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     106 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         portion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fenton, R.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rausch, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Han
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pacific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
BQ797327/c
LOÇUS
                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
  Ş
                                                밁
                                                                                    Š
                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERS ION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                  539
                                                                                                                                               599
                                                                                                                                                                                                                                        659
  380
                                                                                              320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         445
                                                                                                                                                                                          260
                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                  Local Sin
hes 291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   385
                                              GTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTTCG 439
                                                                      CCATTGGTTGGTGACTGATATCCCTGCTACAACTGGGAACCACCTTTGGCAATGAGATTGT 379
                                                                                                                                       TCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTATAC 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTTCGCCGAGCTCTACAACCTCGGCCCGCCTGTCGCCGCCGTCT 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTT 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTGCTACGAGAGCCCTCGTCCGACCATGGGGGATCCATCGCTTCGTGCTCCTTC
                                                                                                                                                                                                                                      TCAGCTAGTCAGCCAACTTAGGGTGGACATTGGAGGGGGATGACTTGAGGACCTTCTATAC
                                                                                                                                                                                        TTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATATCT 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unite de Recherche des Produits de la Vigne Institut National de la Recherche Agronomique 2, place Viala, 34 060 Montpellier Cedex 01, 1 Tel: 00-33-(0)4-99-61-28-62 Fax: 00-33-(0)4-99-61-28-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abbal, P., Agasse, A., Ageorges, A., Atanassova, R., Barrieu, F., Couture, C., Dedaldechamp, F., Delrot, S., Glissant, D., Grimplet, J., Hamdl, S., Romieu, C. and Terrier, N.
Generation of Expressed Sequence Tag from Grape Berry (skin, pulp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ797327 659 bp mRNA line EST 6265 Ripening Grape berries Lambda Zap II L vinifera cDNA clone RT071D11 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or seeds) at Various Developmental Stages Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BQ797327
BQ797327.1 GI:22012293
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vitis vinifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: romieu@ensam.inra.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Romieu C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vitis vinifera.
                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 659)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        primer: T7
                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="ripening stage"
/note="Organ: Fruit; Vector: Lambda 2ap II; Site_1: Ec
/note="Organ: Lambda 2ap II; Site_1: Lambda 2ap II; Site_1: Ec
/note="Organ: Lambda 2ap II; Site_1: Lambda 2ap II; Site_1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:29760"
/clone="RT071D11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Vitis vinifera"
/cultivar="Shiraz"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Ripening Grape berries Lambda Zap II Library"
/dev_stage="ripening stage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                        27.1%;
                                                                                                                                                                                                                                                            Score 231.6;
Pred. No. 1.5e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lambda Zap II Library
                                                                                                                                                                                                                                                                                                                                i; DB 14;
L.5e-30;
hes 99;
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                              659;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      described
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JUL-2002
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                          540
                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ECO RI
                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
AV560420/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE CO
  밁
                                    Ş
                                                                                       Вb
                                                                                                                                     δÃ
                                                                                                                                                                                        밁
                                                                                                                                                                                                                               δ.
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                 594
                                                                                                                                          654
                                                                                                                                                                                        146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          479
                                                                                            86
  26
                                                                                                                                                                                                                                                                                                                                                                              206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20363093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69
```

```
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                            534 GCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATG 593
                    714 TTCAATATATAAGTGTGTAATAAAAA 739
                                                                                                                                                                                                                                       206 GCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATG 147
                                                                                                                                                                               GCTTCTTCTTATAACCAATTGATATTGCATACTCTGATGAGATTTTATGCATCTATAGT
                                                                            GCTTCTTCCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGAGTGGCTGCGGAGGAAGAAGACTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACTGGGTAGGCAGACAGTGTATGCACCAGGGTGGCGCCAAAATTTCAACACTAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGA 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAATATATAAGTGTGTAATAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGGGCGCTCGGGTGGTCGAAGATCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTTGCTGAGCTTTATAATCTTGGTTTGCCTGTTGCTGCTGTTTATTTTAACTGCCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AV560420
AV560420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Erika Asamizu

The First Laboratory for Plant Gene Research

Kazusa DNA Research Institute

Yana 1532-3, Kisarazu, Chiba 292-0812, Japan

Email: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           thaliana
AV560420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 12,028 non-redundant expressed size-selected cDNA libraries DNA Res. 7, 175-180 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST.
thale cress.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 206)
Asamizu, E., Nakamura, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AV560420.1 · GI:8731846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A large scale analysis of cDNA in Arabidopsis thaliana: Generation
                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         206 bp mRNA linear ES Arabidopsis thaliana green siliques Columbia cDNA clone SQl34d05F 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                        XhoI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="Arabidopsis thaliana green siliques Columbia"
/tissue_type="green siliques"
/note="Vector: pBluescriptII SK-; Site_1; EcoRI; Site_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Arabidopsis
/strain="Columbia"
/db_xref="taxon:3702"
/clone="SQ134d05F"
                                                                                                                                                                                                                                                                                                                                         24.1%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                       O
                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                    Score 206; DB; Pred. No. 6.4.
                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                          pBluescriptII SK-;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sato, S. and Tabata, S.
                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           589
                                                                                                                                                                                                                                                                                                                                         DB 10;
6.4e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                       99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence tags
                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-SEP-2000
                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       559
                                                                              27
                                                                                                                                                           87
                                                                                                                                                                                                  653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                        Ç,
```

```
밁
                               Q
                                                                      В
                                                                                                       δÃ
                                                                                                                                                  В
                                                                                                                                                                             Qy
                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                    당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                      310
                                                                                                                                                                                                                                                                                                                                                                                                                                                      190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78 AGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
CAGCAGCTGGGGCGCAGACGGTGTACGCCCCGGGCTGGCGCCAGAACTTCAACACCAGG
                 CGACAGCTTGGCAGACAGTGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGC
                                                                        ATCTGCTACGAGAGCCCTCGGCCGACCATGGGGGATCCACCGCTTCGTGCTGGTGCTGTTC
                                                                                               GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTTGTTT 437
                                                                                                                                                CTACACTGGCTGACGGATATTCCGGGAACTACTGGGGCAGCATTTGGGCAAGAGGTG
                                                                                                                                                                     CTCCATTGGTTGGTGACTATATCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATT 377
                                                                                                                                                                                                                                                           ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT 317
                                                                                                                                                                                                                                                                                                                                   TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT 257
                                                                                                                                                                                                                                                                                                                                                                          ACCAACCTCAGGGTCAGCTACGGGGCCAGGACCGTGTCCAACGGCTGCGAGCTCAAGCCG 309
                                                                                                                                                                                                                                                                                                                                                                                                             ATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCCT 197
                                                                                                                                                                                                                        ACCCTCGTGATGGTGGACCCGGATGCTCCGAGCCCAAGCGACCCGAACCTTAGGGAGTAC
                                                                                                                                                                                                                                                                                                TCCATGGTGGTGCACCAGCCCAGGGTCGAGGTCNNNNNACCTGACATGAGGACCTTCTAC 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGAGCCGCNNNNNNNNNNNNNNNNNNNNNNNNNCGACGTGCTGGACCCCTTCGTCCGGACC 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AY111549
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (25-APR-2002) Maize Mapping Project, Missouri, Columbia, MO 65211, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hainey,C.F., Dolan,M., Miao,G.H., Vogel,J.M., Whitsitt,M.S. Arthur,L.W., Hanafey,M., Morgante,M. and Tingey,S.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC clade; Panicoldeae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Overgo Probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maize Mapping Project/DuPont Consensus Sequences for Design of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AY111549
AY111549.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 1168)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 1168)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mays CL846_1 mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  assemblies resulting from the application of EST contigs to seed DuPont contigs; this resource was assembled by DuPont as part of a collaboration for t overgo addressing of BACs in conjunction with the Ma. Mapping Project 245 g 159 t 336 \cdots have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Zea mays"
/db_xref="MaizeDB:632948"
/db_xref="taxon:4577"
/clone="CL846_1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Maize Mapping Project/DuPont Cornsensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:21216139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 199.4; Di
Pred. No. 3.8e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTC 26-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the Maize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                 497
                                                                      549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
RESULT 8
BE498304
LOCUS
                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGTCAACTACTCAACAATTACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATACGAGTAACGAACGGTGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAATTTAATAACCATTTTAT 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTTCCTTTATAACCAATTGA 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P.S., Hsla,C.C., Kang,Y., Lazo,G.R., Miller,R., Rausch,C.J., Seaton,C.L. and Tong,J.C.
The structure and function of the expressed portion of the wheat genomes - Pre-anthesis spike cDNA library
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Onpublished (1) In Anderson Contact: Olin Anderson US Department of Agriculture, Agriculture Research West Area, Western Regional Research Center and Ruchanan Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE498304 505 bp mRNA linear EST 04-AUG-2000 WHE0963_B10_C19ZS Wheat pre-anthesis spike cDNA library Triticum aestivum cDNA clone WHE0963_B10_C19, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence have been trimmed to remove vector quality sequence with phred score less than Seq primer: Stratagene SK primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE498304.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE498304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: oandersn@pw.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bread wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5105595818
                                                                                      99
                                                                                                                                                                                                                             /lab_host="E. coli SOLR"
/note="Vector: Lambda Uni-ZAP XR, excised phagemid:
Site_1: EcoRI; Site_2: XhOI; Plants were grown in t
greenhouse. Whole spike with awns trimmed, white,
and yellow anther were collected and total RNA, and
                                                                                                                                             poly(A) RNA were prepared, a cDNA library was made, and the CDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside, Plasmid DNA
                                                                                 preparations and DNA sequencing were Anderson lab (all other authors)."
148 c 160 g 98 t
                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Wheat pre-anthesis spike
/tissue_type="Spike before anthesis"
                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Triticum aestivum"
/cultivar="Chinese Spring"
/db_xref="taxon:4565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                          /clone="WHE0963_B10_C19"
                                                                                                                                                                                                                                                                                                                                         /dev_stage="Adult plant"
23.2%;
Score 198.4; DB 10; Pred. No. 8.4e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         r sequence
1 20
                   Length 505;
                                                                                                                           performed
                                                                                                                                                                                                                                                                                                                                                                                   cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Service, Pacific
                                                                                                                                                                                                                                                                           in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pooideae
                                                                                                                                                                                                                                                     green
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
BF483056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGGAACAACCTTTGGCAATGAGATT 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCAACCTCAGGGTGACCTTCGGGAACAGGACCGTGTCCAACGGCTGCGAGCTCAAGCCG 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCCT 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCA 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTGCTACGAGAGCCCTCGTCCGACCATGGGGATCCACCGCTTCGTGCTCGTACTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCCACTGGCTTGTGACAGATATCCCCGGTACAACTGGTGCGTCGTTCGGGCAGGAGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACACTCGTGATGGTAGACCCAGATGCTCCAAGTCCAAGCGATCCCAACCTTAGGGAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGGTCGCCCAGCAGCCCAGGGTTGAGGTGGGCCGGCAATGAGATGAGGACCTTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGGACCCGCTGGTTGGCAGGGTTGTGGGGGGACGTGCTGGACCCCTTCGTCCGGACC 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      280;
                                                                                                                                                                                                                                                                                                      1 (bases 1 to 491)
Anderson,O.D., Chao,S., Choi,D.W., Close,T.J.
Anderson,O.D., Chao,S., Lazo,G.R., Miller
P.S., Hsia,C.C., Kang,Y., Lazo,G.R., Miller
Seaton,C.L. and Tong,J.C.
The structure and function of the expressed
genomes - Pre-anthesis spike cDNA library
Unpublished (2000)
Contact: Olin Anderson
                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Trache
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BF483056 491 bp mRNA linear EST WHE2314_C03_E06ZS Wheat pre-anthesis spike cDNA library aestivum cDNA clone WHE2314_C03_E06, mRNA sequence.
BF483056
                                                                                                                                                                                                                                                            US Department of Agriculture, Agriculture Research West Area, Western Regional Research Center 800 Buchanan Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BF483056.1
EST.
                                                                                                                                                                       quality sequence with phred score less than Seq primer: Stratagene SK primer.
                                                                                                                                                                                                       Email: oandersn@pw.usda.gov
Sequence have been trimmed to remove vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bread wheat.
                                                                                                                                                                                                                                     Fax: 5105595818
                                                                                                                                                                                                                                                    Buchanan Street,
: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                          /clone_lib="Wheat pre-anthesis spike
/tissue_type="Spike before anthesis"
/dev_stage="Adult plant"
 /note="Vector: Lambda Uni-ZAP
Site_1: EcoRI; Site_2: XhoI; F
                                                                                      /clone="WHE2314_C03_E06"
                                                                                                   /cultivar="Chinese Spring"
/db_xref="taxon:4565"
                                                                                                                                                            Location/Qualifiers
                                                                                                                                 /organism="Triticum aestivum"
                               'lab_host="E. coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 136;
                              SOLR"
                                                                                                                                                                                                                                                                                                                                                                             Close, T.J., F
R., Miller, R.,
   Plants
                XR,
 excised
ts were g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                           sequence
20
                                                                                                                                                                                                                                                                                                                                                  portion
                                                                         CDNA
                                                                                                                                                                                                                                                                                                                                                                             Fenton,R.D., H., Rausch,C.J.,
1 phagemid;
grown in the
                                                                         library"
                                                                                                                                                                                                                                                                                             Service,
                                                                                                                                                                                                                                                                                                                                                   of the wheat
                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-DEC-2000
Triticum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                        104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           268
                                                                                                                                                                                                                                                                                                                                                                                                                                        Pooideae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328
                                                                                                                                                                                                                                                                                              Pacific
                                                                                                                                                                                                                                                                                                                                                                                            Han
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
AV937451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                             FEATURES
                                                                                                                                                COMMENT
                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                COCUS
                                                                                                                                                            AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                ORGANISM
                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                     443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
```

```
78 AGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCA 137
CAGCAGCTCGGCCGCATACCGTGTCCGCTCCCGGGTGGCGCCAGAACT
                                             CGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAGAACT 486
                                                                                                                                                GTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTT 437
                                                                                                                                                                                                      CTCCACTGGCTTGTGACAGATATCCCCCGGTACAACTGGTGCATCCTTCNGGCAGGAGGTG
                                                                                                                                                                                                                                 CTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGGAACAACCTTTGGCAATGAGATT 377
                                                                                                                                                                                                                                                                                                            ACACTCGTGATGGTAGACCCAGATGCTCCAAGTCCAAGCGATCCCAACCTTAGGGAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                  TCCATGGTCGCCCAGCAGCCCAGGGTTGAGGTGGGCCGCCAATGAGATGAGGACCTTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTAT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCAACCTCAGGGTTTCTTCTGGAACAGGACCGTGTCCAACGGCTGCGAGCTCAAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGGTGACTAATGGCTTTGGATCTAAGGCCT 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGTGCTACGAGAGCCCTCGTCCGACCATGGGGATCCATCGCTTCGTGCTCGTGCTCTTC 442
                                                                                                                                                                                                                                                                                                                                                            ACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
276; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             greenhouse. Whole spike with awns trimmed, white, green and yellow anther were collected and tottal RNA, and poly(A) RNA were prepared, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside. Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 196.8; DB 1
Pred. No. 1.6e-24;
0; Mismatches 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
     491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                               317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

Sato,K., Saisho,D. and Takeda,K. Barley EST sequencing project in Unpublished (2002) AV937451 542 bp mRNA linear EST 18-JAN-2002 AV937451 K. Sato unpublished cDNA library, strain H602 adult, heading stage top three leaves Hordeum vulgare subsp. spontaneum cDNA clone bahlin08 5', mRNA sequence. Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540, Hordeum vulgare subsp. spontaneum.
Hordeum vulgare subsp. spontaneum
Eukaryota; Viridiplantae; Streptophyta; 1111 Yata, Mishima, Tel: 81-559-81-6856 Contact: Tadasu Shin-i Spermatophyta; Magnoliophyta; Fax: 81-559-81-6855 (bases 1 to 542) tshini@genes.nig.ac.jp Location/Qualifiers /organism="Hordeum vulgare /strain="H602" GI:18233248 Hordeum. Liliopsida; NIG subsp. and Embryophyta; Tracheophyta; a; Poales; Poaceae; Pooidea Okayama spontaneum" Pooideae

```
RESULT 11
BG647258
                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                           COMMENT
                                                                                                     REFERENCE
                                                                                                                                                                             SOURCE
                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                         FOCUS
                                                               TITLE
                                                                                                                                                                ORGANISM
                                       JOURNAL
                                                                                                                                                                                                                                                                                                                      499
                                                                                                                                                                                                                                                                                                                                              580
                                                                                                                                                                                                                                                                                                                                                                      439
                                                                                                                                                                                                                                                                                                                                                                                              520
                                                                                                                                                                                                                                                                                                                                                                                                                     379
                                                                                                                                                                                                                                                                                                                                                                                                                                              460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                              GAAG
                                                                                                                                                                                                                                                                                                                      GGAG
                                                                                                                                                                                                                                                                                                                                                                     TTGGCAAGCCCGTCGCCGTGTACTTCAACTGCCAGCGTCCCACGGGCACCGGCGGA
                                                                                                                                                                                                                                                                                                                                                                                    TCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                    TCCCAGCATCAACAAACGATAGCTTTGGAAAAGAGATCGTGCCATACGAGAGCCCAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCCTGCTACAACTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NTGCGCCTAATCCCAGCAACCCAACCCTGAGGGAGTACCTGCACTGGATGGTGACTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGTTGAGATTGGTGGTGATGTTTTCGTGTTGCCTATACTCTAGTTATGGTGGATCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGGAGGCCTGTGTTCAATGGCATGGAGTTTCGCTCACCAGCAGTATCTCTGAAACCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAA 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTTGTTGGAGACGTTCTTG-ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATG 159
                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303;
Contact: Michael G. Hahn
Complex Carbohydrate Research
University of Georgia
                                                Hahn, M.G., Ojanen-Reuhs, T., Samac, D., '
Utterback, T., Cho, J. and Fraser, C.M.
ESTs from roots of Medicago truncatula
oligogalacturonides of DP 6-20
                                                                                                                         Medicago truncatula

Medicago truncatula

Eukaryota; Viridipliantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;

Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Trifolieae;
                                     Unpublished (2001)
                                                                                                                                                                                                                                     BG647258
EST508867 HOGA Medicago
                                                                                                                                                                                                                   BG647258
                                                                                                                                                                                                                                mRNA
                                                                                                                 Medicago.
                                                                                                                                                                              barrel medic
                                                                                                                                                                                                       BG647258.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                      502
                                                                                                                                                                                                                                                                                                                                              583
                                                                                                    (bases 1 to 781)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:77009"
/clone="bahlin08"
/clone="bahlin08"
/clone=lib="K. Sato unpublished cDNA library, strain adult, heading stage top three leaves"
/tissue_type="top three leaves"
/dev_stage="adult, heading stage"
/dev_stage="adult, heading stage"
150 c 146 g 124 t 2 others
                                                                                                                                                                                                     GI:13782360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 184.6; D
Pred. No. 1.9e-
                                                                                                                                                                                                                                         truncatula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                     dq
                                                                                                                                                                                                                                         mRNA
cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180;
                                                                                      Town, C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                               treated
                                                                                                                                                                                                                                          clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                        рноса-1619
                                                                                                                                                                                                                                         24-APR-2001
) 5' end,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138
                                                                                                                                                                                                                                                                                                                                                                                                                                             519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
                                                                                                                                                                                                                                                                                                                                                                      498
                                                                                                                                                                                                                                                                                                                                                                                             579
                                                                                                                                                                                                                                                                                                                                                                                                                    438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
             멂
                                    Š
                                                             밁
                                                                                   δÃ
                                                                                                              В
                                                                                                                                   δÃ
                                                                                                                                                             밁
                                                                                                                                                                                     õ
                                                                                                                                                                                                               В
                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                477
                                                                                                                                                                                                                                                                                                                                                                     177
                                                                                                                                                                                                                                                                                                                                                                                                                     117
              597
                                                                                                                                                                                         421
                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                  297
                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                    237
                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    57
             GCACCTATA
```

밁 δ. 밁 δÃ 밁 δÃ В Qy Ъ δÃ

γQ

망

QΥ 밁 Ş ₽ δ

```
Query Match
Best Local
598 CTTCCTTTA 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                            CCTTTGGCAATGAGATTGTGTGTGTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                            CAGTTTTCTACAATTGTCAGAGGGAGGAGGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTT
                                                                                                                                          GGGATTACTTCAACACTCGCAATTTTGCTTCACAGAATGATCTTGGTCTCCCTGTTGCTG
                                                                                                                                                                   GCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCG
                                                                                                                                                                                                                                       TTGTGTTTGTTCTATTCAAACAAAAGAATAGAGAATCAGTGACAGCATCACCATCTTCAA
                                                                                                                                                                                                                                                                                 TCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATG----CACCAGGGTGGC
                                                                                                                                                                                                                                                                                                                                 CATTTGGGAAAGAAGTAGTGAGCTATGAGATACCAAAGCCAAATATAGGTATACACAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                           CTTATCTAAGAGAACACTTGCACTGGATTGTGACAGATATTCCTGGAACAACAGATGCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACATGAGGTCCTTCTATACACTGGTGATGACAGACCCTGATGTTCCTGGCCCTAGTGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCATGAGTTTTTCCCTTCCACTATCAACACCCAAACCCCAAAGTTGAGATTGATGGTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTCCTTTACCACAAGCATGAAAATGACTGTGAGTTACAACAAGAAGCAAGTCTTCAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAATGGCAAGAATGTCTCAAGAACCACTCATTGTTGGAAGAGTGATAGGAGAAGTTCTTG
                                                326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G390854e TIGR sequence name: MT
available at: www.medicago.org
seq primer: SKmod (CTA 9AA CTA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220 Riverbend Road, Ather Tel: 706-542-4457 Fax: 706-542-4412 Email: hahn@ccrc.uga.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"Vector: pBluescript SK-; Site_1: EcoRI; Site_2: XhOI; cDNA was prepared from polyA+ enriched RNA. The cDNA was directionally ligated into the Unizap XR vector from Stratagene and packaged using Gigapack III Gold packaging extracts. Plasmids containing cDNA inserts were excised from the recombinant lambda-Zap phage using Ex-assist helper phage and propagated in SOLR cells."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="HOGA"
/tissue_type="3 day old seedling roots"
/dev_stage="24 hours after treatment in
with 0.5 mg/ml oligogalacturonides (DP opresence of 100 ug/ml Gentamicin"
/lab_host="XIOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Medicago truncatula"
/cultivar="A17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:3880"
/clone="pHOGA-1619"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.18; 59.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Athens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 181; DB 12;
Pred. No. 6.7e-22;
0; Mismatches 220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GA 30602-4712,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MTMBW53TK More
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         င္ပ
(၁)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6-20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                       476
                                                                                               597
                                                                                                                                                                                         537
                                                                                                                                                                                                                                                                                                                                 416
                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         116
                                                                                                                                                                                                                                                                                     477
                                                                                                                                                                                                                                                                                                                                                                                                                              356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
```

```
δÃ
                                                                                                                                             망
                                                                                                                                                                            Q
                                                                                                                                                                                                                                                   δÃ
     밁
                                   Ş
                                                                          밁
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
BM407295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
     328
                                                                                                                                                208
                                                                                                                                                                                                                148 AGTGTTTAATGGTCACGAACTCATGCCTCCTATCATTGCTTCTAAGCCTCGTGTGGAGAT
                                                                                                                                                                                                                                                                                                                               113
                                                                                                                                                             230 TGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTGATGGTGGATCCAGATGTTCCAAG
                                                                                                                                                                                                                                                 170 GGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                              88
                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                            53 AAGATCAAAGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGA 112
AACTGATGCTTCTTTTGGAAAAGAGATAGTGAGCTACGATAGTCCAAAACCAGTGATCGG
                                 AACTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGG
                                                                      TCCTAGTGATCCTTACTTAAGGGAACACCTCCACTGGATTGTGACAGATATTCCTGGTTC
                                                                                         TGGTGGTGAAGACATGAGATCTGCTTATACACTCATCATGACTGATCCAGATGTTCCAGG
                                                                                                                                                                                                                                                                                                                          CGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTA---CTTATGGCCAAAGAGA 169
                                                                                                                                                                                                                                                                                      AGTAGTTGATAGTTTCAATCCAAGTGTGAAAATGAATGTGATATATAATGGAAGCAAACA
                                                                                                                                                                                                                                                                                                                                                             AAGGATCAATATGTCTTGTAGAGATATTGAACCACTTATTGTTGCAAGAGTGATTGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                     324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BM407295
EST581622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 718) van der Hoeven, R., Sun, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               potato.
Solanum tuberosum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          For clone info: please contact Research Genetics, Libraries Division tel_1-800-711-6195, email cdna@resgen.com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cdna@resgen.com
For clone info: please
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Generation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tanksley, S. and Baker, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Utterback, T., Chiemingo, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM407295.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BM407295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-800-711-6195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XhoI; Suppller: Cornell University, Tanksley lab; sequencing; The Institute for Genomic Research. Roots wei isolated from in vitro grown stem cuttings on CM medium. Roots were isolated two weeks after placing the stem cuttings from in vitro grown plants on medium."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="in vitro grown stem cuttings"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:4113"
/clone="cPRO30M16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Solanum tuberosum"
/cultivar="Kennebec"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      potato roots sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="potato roots"
/tissue_type="roots"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:18258925
                                                                                                                                                                                                                                                                                                                                                                                                                                                  20.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ESTs from potato roots
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genetics, Libraries Division
                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 173.2; DB 13; Pred. No. 1.5e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Solanum
                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches 208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          718 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Karamycheva,S.A., Tsai,J., Van Aken,S.,
    Bougri,O., Buell,C.R., Ronning,C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p mRNA linear EST 22-JAN-2002
tuberosum cDNA clone cPRO30M16 5'
                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   718;
                                                                                                                                                                                                                                                                                                                                                                                                                                6;
                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roots were
                                                                                                                                                                                                                                                                                        147
                                     409
                                                                                                        349
                                                                                                                                                                              289
                                                                                                                                                                                                                                                     229
                                                                                                                                                                                                                                                                                                                                                             87
 387
                                                                        327
                                                                                                                                             267
                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                                                                N
```

```
Ş
                                                멍
                                                                          Ş
                                                                                                           В
                                                                                                                                       Š
                                                                                                                                                                         밁
                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT · 13
BJ453783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                 342
                                                  198
                                                                                                             138
                                                                                                                                            222
                                                                                                                                                                                                        162
                                                                                                                                                                                                                                                                    508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         388
                                                                                                                                                                                                                                       18
                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                       CAAAGAGAGGTGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGA 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCTGTTGCTGCTGTCTACTTTAATGCCCAAAGAAACTGCTGCTAGAAGAAGATGA 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARTTCATCGTGTGTTATATTGTTTCGACAGCTT---GGCAGGCAAACAGTGTATGC 466
                                               GCTCCAAGCCCAAGTCACCCATCACTAAGGGAGTACTTGCACTGGATGGTGTCAGACATC
                                                                          GTTGATTTCGGTGGCAGTGACATGAGAGTTCTACACACCCTGATATTGGTGGATCCAGAC
                                                                                                                                          GTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGAT
                                                                                                                                                                                                                                       GTTATGCAAGATGTGCTTGATCCATTTACATCAACCGTTCCATTAAGGATAGCCTACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATTCATCGATACGTGTTCGTATTATATAGGCAAAATAGAGGAAGACAAACAGTGAAATC 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGGGAGGAGTGGCTGCGGAGGAAGAAGA 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCT 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hordeum vulgare subsp. vulgare.
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BJ453783 498 bp mRNA linear EST 23-MAY-2002 BJ453783 K. Sato unpublished cDNA library, cv. Akashinriki vegetrative stage leaves Hordeum vulgare subsp. vulgare cDNA clone baak44h08 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sato, K., Saisho, D. and Takeda, K. Barley EST sequencing project in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institute of Genetics
1111 Yata, Mishima, Shizuoka 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center For Genetic Resource Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВJ453783.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 498)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 Yata, Mishima,
81-559-81-6856
81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                 132
                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tshini@genes.nig.ac.jp
                                                                                                                                                                                                                                                                                                                                                                                                          /clone="baak44h08"
/clone_11b="K. Sato unpublished cDNA
Akashinriki vegetative stage leaves"
/tissue_type="leaves"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Hordeum vulgare subsp. vulgare"
/cultivar="Akashinriki"
/db_xref="taxon:112509"
                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="vegetative stage"
114 c 129 g 123 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:21132359
                                                                                                                                                                                                                                                                                                                  19.5%;
                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                  Score 166.8; DB 13; Pred. No. 2.3e-19;
                                                                                                                                                                                                                                                                                                   Mismatches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Okayama
                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                         library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Univ
                                                                                                                                                                                                                                                                                                                                498;
                                                                                                                                                                                                                                                                                                 Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                            ç
                                                                                                                                          281
                                                                                                                                                                                                                                                                    161
                401
                                               257
                                                                              341
                                                                                                             197
                                                                                                                                                                         137
                                                                                                                                                                                                                                       77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pooideae
                                                                                                                                                                                                                                                                                                 1;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
BJ448552
                           Q
                                                             В
                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΨ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
 밁
                                                                                                                       рь
                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                    112 ACGTTCTTGATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
   149
                                                                                            172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    258
                                                                                                                          29
                GTGGAGAAGACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCCAGATGTTCCAAGTC 291
                                                                                                                       ATGTGCTTGATCCATTTACATCAACCGTTCCATTAAGGATAGCCTACAACAATAGGCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACGTT---GTGGCTGCTCATATTTCAACTGTCAAAGGGAAGGTGGATCAGGCGGAAGA 494
                                                                                  TGACTAATGGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCCAAGAGTTGAGATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTGCACCAGACGTCCGACAAAACTTCAGCTGCAGGAACTTTGCACGGCAGTACCACCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATGCACCAGGGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTC 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGATCTGGTATCCACCGGATGGTATTTGTGCTGTTCCAGCAACTAGGCAGGGGTACAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGGAACAACTGGTGCCAGCTTCGGCCGAGAGCTTGTAGTTTATGAAAGACCAGAACCA
GTGGCAGTGACATGAGAGTTCTACACACCCTGATATTGGTGGATCCAGACGCTCCAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BJ448552 K. Sato unpublished cDNA library, cv. Akashinriki vegetative stage leaves Hordeum vulgare subsp. vulgare cDNA clone baak20f16 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hordeum vulgare subsp. vulgare.
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center For Genetic Resource Information National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sato,K., Saisho,D. and Takeda,K.
Barley EST sequencing project in NIG and Okayama Univ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВJ448552.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Triticeae; Hordeum. (bases 1 to 671)
                                                                                                                                                                                                                                                                   189
                                                                                                                                                                                                                                                                                                                                                                                                                                                       81-559-81-6855
                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                             /clone_lib="K. Sato unpublished cDNA
Akashinriki vegetative stage leaves"
/tissue_type="leaves"
                                                                                                                                                                                                                                                                                                                                                       /organism="Hordeum vulgare subsp. vulgare"
/cultivar="Akashinriki"
/db_xref="taxon:112509"
                                                                                                                                                                                                                                                                /dev_stage="vegetative stage"
142 c 166 g 173 t
                                                                                                                                                                                                                                                                                                                                         /clone="baak20f16"
                                                                                                                                                                                                                                                                                                                                                                                                           . . 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:21127178
                                                                                                                                                                                                    19.2%;
                                                                                                                                                                                   Score 164; DB 13;
Pred. No. 6e-19;
D; Mismatches 185;
                                                                                                                                                                                    185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                 Length 671;
                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                others
                                                                                                                                                                                                                                                                                                                          library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ear EST 23-MAY-2002
Akashinriki
                                                                                                                                                                                   ω
••
                                                                                                                                                                                                                                                                                                                            CV
                                                                                                                                                                                   Gaps
                                                             148
                                                                                        231
                                                                                                                       88
                                                                                                                                                      171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 317
208
                                                                                                                                                                                    1;
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
BJ315664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SDOO
Query Match
Best Local Similarity
Matches 289; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGAACAACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAA 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAAGTCACCCATCACTAAGGGAGTACTTGCACTGGATGGTGTCAGACATCCCTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACGTCCGACAAAACTTCAGCTGCAGGAACTTTGCACGGCAGTACCACCTAAACGTT----G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTGGCGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCG 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCACCGGATGGTATTTGTGCTGTTCCAGCAACTAGGCAGGGGTACAGTTTTTGCACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGTGCCAGCTTCGGCCGAGAGCTTGTAGTTTATGAAAGACCAGAACCAAGATCTGGTA 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCTGCCTCATATTTCAACTGTCAAAGGGAAGGTGGATCAGGCGGAAGAAGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BJ315664
BJ315664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center For Genetic Resource Information National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540, Tel: 81-559-81-8856
Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aestivum cDNA clone why
BJ315664
BJ315664.1 GI:20121218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Expressed genes in Triticum aestivum Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae; Triticeae; Triticeam.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ogihara, Y. and Murai, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bread wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to
                                                                                                                                                                            153
             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tshini@genes.nig.ac.j
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    597 bp mRNA lineary. Ogihara unpublished cDNA library, Who cDNA clone whyf19117 5', mRNA sequence.
                                                                                                                                                                        Plasmid DNA preparations and DNA performed in the OD Anderson lab 151 c 143 g 147 t
                                                                                                                                                                                                                                                                library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab at the University of California, Riverside (Akhunov, Chi, Choi, Close, Fenton, Kianian, Otto, Simons, Zhang).
                                                                                                                                                                                                                                                                                                                                                                                          /note="Vector: Lambda Uni-ZAP XR, excised phagemid; Site_1: ECORI; Site_2: XhoI; Plants were grown under hydroponic conditions at UC Davis, salt stressed for 12 hours, and for 7 days, then dissected and frozen (Akhunov in J Dvorak Lab). Total RNA was prepared from sheath tissue, equal quantities of RNA were pooled from the two samples, polyA was purified from the pooled RNA, a cDNA controlled the strength of the pooled RNA, a cDNA controlled the strength of the pooled RNA, a cDNA controlled the strength of the pooled RNA, a cDNA controlled the strength of the strength of the pooled RNA, a cDNA controlled the strength of the streng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Y. Ogihara unpublished cDNA library, Wh_yf"
/tissue_type="spikelet at early flowering"
/dev_stage="Feekes' scale 6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="whyf19i17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:4565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cultivar="Chinese"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Triticum aestivum"
                                        18.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               597)
          Score 157.2;
Pred. No. 9.4e
0; Mismatches
          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .ac.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Spring"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             411-8540, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA linear EST 09-APR-2002 cDNA library, Wh_yf Triticum
                                        9.4e-18;
                                                                          DB 13;
                                                                                                                                                                                                       sequencing were
(all other authors)."
             Indels
                                                                   Length
                                                                                                                                                                            others
          ω
      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 351
                                                                                                                                                                                                                                                                                                         Chin
```

```
Š
 멍
                         В
                                                 В
                                                                                                             Š
                                                                                                                                                                                                   밁
                                               563
       558 AGGGAGAGTG 567
                      203
                                                                                                                                                          198 TCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGGGGGAAGAAGACCTCAGGAACTTCTAT 257
                                                                                                                                                 TCAGCGGTTGTATCTAAACCACGAGTAGAGGTCCAAGGGGGGTGACTTGCGATCCTTGTTC 262
                                                                                                                                                                                                  GACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGATCAATC 140
AGGGAGACTG 572
```

Search completed: May 2, 2003, 11:50:30 Job time: 1791.5 secs

را

Run

```
Minimum
Maximum
                                                                                                                                                                                                          Result
                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic -
                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                                                                                        Post-processing:
                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         on:
222222111543210987654
222222111543210987654
76543210987
                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                      DB
DB
                                                                                                                                                               856
842.4
71.8
47
                                                                                                                                                                                                   Score
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                      length: 2000000000
                                                                                                                                                                                                                                                                                                                                                             length:
                                                                                                                                                                                                   Match
                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                          441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Мау 1,
US-09-845-849-1
                                                                                                                                                                                                                                                                                                                                        Minimum Match
                                                                                                                                                                                                                                                                                                            Issued_Patents_NA: *
                                                                                                                                                                                                                                                                                                                          Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                             tctagaactagtggatcccc.....aaaaaaaaaaaaaactcgag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                                                              . 4
              /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/Packfiles1.seq:*
                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2003, 15:58:02; Search time 60 Seconds
GenCore version 5.1.5 (c) 1993 - 2003 Compugen
                                                                                                                                                                                                    DВ
                                                                                                                                                                                                                                                                                                                                         80
    US-09-060-726A-3
US-09-060-726A-1
US-07-644-372-1
US-08-467-948A-3
US-08-487-2130C-60
US-08-482-130C-60
US-08-482-130C-60
US-08-906-769-60
US-08-906-769-60
US-08-906-769-60
US-08-906-769-60
US-08-906-13-60
US-08-639-075A-60
US-08-639-075A-60
US-08-639-075A-60
US-08-639-075A-60
US-08-639-075A-60
US-08-639-075A-60
US-08-639-075A-60
US-08-421-431-60
US-08-421-431-60
US-08-421-446-6-3
US-08-421-446-3
US-08-421-146C-3
US-08-461-146C-3
US-08-461-146C-3
US-08-461-145C-11
US-08-461-145C-11
                                                                                                                                                                                                   IJ
                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (without alignments)
4375.255 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                           882724
                                                                                                                                                                                                  Description
     Sequence
Sequence
Sequence
                         Sequence
Sequence
Sequence
Sequence
Sequence
                                                            Sequence
Sequence
Sequence
                                                                                                                   Sequence
Sequence
                                                                                                                                  Sequence
                                                                                 Sequence
                                                                                        Sequence
                                                                                                Sequence
                                                                                                      Sequence
                                                                                                              Sequence
                                                                                                                                         Sequence
                                                                                                                                                 Sequence
                                                                                                                                                               Sequence
                                                                                                                                                                      Sequence
                                                                                                                                                                             Sequence
                                                                                                                                                                                     Sequence
                                                                                                                                                       Sequence
           6, Appli
3, Appli
11, Appli
13, Appli
3, Appli
11, Appli
11, Appli
11, Appli
                                                            Appli
Appli
Appli
Appli
Appli
                                                            App
App
                                                                                 Арр
Арр
Арр
Арр
Арр
Арр
Арр
                   밁
                               Š
                                               В
                                                          δÃ
                                                                          밁
                                                                                       ρ
                                                                                                       밁
                                                                                                                   δÃ
                                                                                                                                  밁
                                                                                                                                               δÃ
                                                                                                                                                              Б
                                                                                                                                                                            δã
                                                                                                                                                                                                                                                                                                                                               RESULT 1
US-09-060-726A-3/c
                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                           Matches
      361
                    556
                                                616
                                                                           676
                                                                                                       736
                                                                                                                                                               856
                                 301
                                                            241
                                                                                        181
                                                                                                                                   796
                                                                                                                                                                                           856;
```

o o

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
43.6	43.6	43.6	43.6	43.6	43.8	43.8	43.8	43.8	43.8	43.8	44.4	44.6	44.8	44.8	45	45	45.4
5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.2	5.2	5.2	5.2	ω	5.3	5 .ω
860	860	860	860	860	2775	2775	1058	1058	1058	1058	866	545	3328	897	1585	1585	2503
1	4	سا	<u></u>	<u>ш</u>	4	_	4	4	4	4	4	4	4	4	4	4	4
US-08-456-265A-33	US-08-449-043-33	US-08-444-803-33	US-08-449-315-33	US-08-181-271A-33	US-09-060-208-1	US-08-730-771-1	US-09-072-596-14	-056-556-	US-08-818-111-14	US-08-818-112-14	US-09-257-179-11	US-09-227-357-125	US-08-960-048-1	US-08-899-330-14	US-09-022-765-54	US-09-183-861-54	US-08-628-829-7
Sequence 3	Sequence 3	Sequence 3	Sequence 3	Sequence 3	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 1	Sequence 5	Sequence 5	Sequence 7
33, Appl	33, Appl	33, Appl	33, Appl	33, Appl	l, Appli	l, Appli	14, Appl		14, Appl			125, App	1, Appli	14, Appl	54, Appl	54, Appl	7, Appli

ALIGNMENTS

; SOFTWARE: FASTSEQ for Windows ', SEQ ID NO 3; LENGTH: 856; TYPE: DNA; ORGANISM: Arabidopsis thaliana US-09-060-726A-3 Sequence 3, Application US/09060726A Patent No. 6225530 APPLICANT: Weigel, Detlef APPLICANT: Salk Institute TITLE OF INVENTION: FLOWERING LOCUS TITLE OF INVENTION: MODIFIED PLANTS FILE REFERENCE: SALKINS.026 CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 1998-(NUMBER OF SEQ ID NOS: 13 FastSEQ for Windows Version SALKINS.026A 1998-04-15 US/09/060,726A T (FT) HAVING AND GENETICALLY MODULATED FLOWER DEVELOPMENT

Length 856

0

61 AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG 1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG 100.0%; illarity 100.0%; Conservative 0 0; Score 856; DB 4; Pred. No. 3e-217; D; Mismatches 0 0; Indels 0; Gaps 557 300 240 677 180 737 120 797 60 617

```
밁
                Š
                                    밁
                                                 Ω
                                                                       멍
                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                    Db ·
                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÔ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                              US-09-060-726A-1
                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                           Query Match
Best Local S
Matches 854
                                                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version SEQ ID NO 1
LENGTH: 855
                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/09060726A Patent No. 6225530 GENERAL INFORMATION:
                                                                                                                                               NAME/KEY: CDS
LOCATION: (63)...(590)
1-09-060-726A-1
                                                                                                                                                                                                                            TITLE OF INVENTION: FLOWERING LOCUS T (FT)
TITLE OF INVENTION: MODIFIED PLANTS HAVING
FILE REFERENCE: SALKINS.026A
CURRENT APPLICATION NUMBER: US/09/060,726A
CURRENT FILING DATE: 1998-04-15
NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                 APPLICANT: Weigel, Detlef APPLICANT: Salk Institute
                                                                                                                                                                        LENGTH: 855
TYPE: DNA
ORGANISM: Arabidopsis thaliana
FEATURE:
  121
                    121
                                                                                                                                                                                                                                                                                                                                                                                    841
                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                        136
                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         496
                                     61
                                                       61
                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                   16
                                                                                                                                                                                                                                                                                                                                                                                                      76
                                                                         ш
                                                                                          щ
ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                                                                                                                                                                                   AGATGTCTATAAATATAAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                               TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                               TATAAGTGTGTAATAAAAATGAGAGGGGAGGAAAATGAGAGTGTTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                      TATAAGTGTGTAATAAAAATGAGAGGGGGGGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGTGTTTATATTTCGACAGCCTTGGCAGCCAAACAGTGTATGCACCAGGGTGGCGCC
                                    AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                        TCTAGAACTAGTGGATCCCCCGGGCTCCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                            854;
                                                                                                            Conservative
                                                                                                                     98.4%;
                                                                                                                                                                                                                                                                                                                                                                                    856
                                                                                                           0;
                                                                                                          Score 842.4; DB 4;
Pred. No. 1.2e-213;
0; Mismatches 1;
                                                                                                                                                                                                                                                                T (FT)
                                                                                                                                                                                                                                                                AND GENETICALLY MODULATED FLOWER DEVELOPMENT
                                                                                                                            4.
                                                                                                                            Length
                                                                                                           Indels
                                                                                                          1;
                                                                                                          Gaps
                  180
                                                     120
180
                                   120
                                                                       60
                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                      77
                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       437
                                                                                                          1;
                                                                                                                                                                                         RESULT 3
US-07-644-372-1
                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
```

Š

```
Sequence 1, Application US/07644372 Patent No. 5416009
                                                                                                                                                                                                                                                              GENERAL INFORMATION:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                          NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                    ADDRESSEE: CUSHMA
STREET: 1615 L. S
CITY: Washington
STATE: D.C.
COUNTRY: USA
                                                                                                                                                                                        TITLE OF INVENTION: A DNA SEGMENT ENCODING TITLE OF INVENTION: IMMUNODIAGNOSTIC ANTIGE
                                                                                                                                                                                                                   APPLICANT: Lazzeri, Mario
APPLICANT: Nutman, Thomas
APPLICANT: Weiss, Niklaus
                                                                                                                                                                                                                                                                                                                                                                               AAAAAAAAACTCGAG 856
                                                                                                                                                                                                                                                                                                                                                                                                                       TATAAGTGTGTAATAAAAATGAGAGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCGTGTTTATATTGCTTTCGACAGCCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACCTCCGAGAATATCTCCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                 AAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20036
                                                                                                                              : CUSHMAN,
1615 L. Stre
                                                                                                                               Street,
                                                                                                                                 DARBÝ
eet, N
                                                                                                                                                                                                                                   œ Ħ
  Version
                                                                                                                                                                                        ANTIGEN
    #1.
                                                                                                                                                                                                        SPECIFIC
    . 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                        839
                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
```

CURRENT APPLICATION DATA:

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                      RESULT 4
US-08-467-948A-3/c
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-07-644-372-1
                                                                                                                                                                                                                                                               Sequence 3, Applic
Patent No. 5998164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 217; Conserv
                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (202)822-094.
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)861-3000
TELEFAX: (202)822-0944
                                                      APPLICANT: SUTTON III, GRANGER G.
APPLICANT: ROSEN, CRAIG A.
TITLE OF INVENTION: Polynucleotides Encoding Human
TITLE OF INVENTION: Coupled Receptor GPR2
NUMBER OF SEQUENCES: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS
                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                       APPLICANT:
                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395
                                                                                                                                                                                                                                                                                                                                                                               635 GAG 637
                                                                                                                                                                                                                                                                                                                                                                                                                    561 GAG 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                     575 TTTGCAAACAACATCACTTGGGAAATCCAGTTGCCGGAAACTTCTTCCAGGCTAAACAT 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           501 TTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTTTTCTACAATTGTCAGAGG 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              515 CCTGGAAGTATCACGGATACTCAACATGGCGGAAATCGCCGAAATTTCAAAGTTATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   444 CTTGGCAGGCAAACAGTGTATGCACCAGGGTG---GCGCCAGAACTTCAACACTCGCGAG 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       455 GGATCAGGTCCACGAAAAGGCACAGGACTTCATCGTTATGTATTCTTGGTTTATAAACAA 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            384 TACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTCGTGTTTATATTGTTTCGACAG 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     325 GGTTGGTGACTGATATCCCTGCTACAACTG-GAACAACCTTTGGCAATGAGATTGTGTGT 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          335 TTATGACTGATCCGGACGCACCATCTCGAAAAAACCCCCGTATTCAGAGAGTGGCACCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               265 TTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCTCACCTCCGAGAATATCTCCATT 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  275 TAAAGAATCAGCCGACAAAAGTATCATGGGATGCGGAACCTGGAGCCTTATATACGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        205 TTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGACCTCAGGAACTTCTATACTTTGG 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215 TCAATGTTAGTTACAATAATCTCACGGTGAATCTGGGCAATGAACTTACGCCGACGCAGG 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145 TAPAGGTTACTTATGGCCAPAGAGAGGTGACTATGGCTTGGATCTATAGGCCTTCTCAGG 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 19910:
                       DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTTGATAATTAATATTCTGGACAAAATGTTAGCAGTGGCACAGTGTTATCTGATTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUCLEIC ACID
                                                                                                                                                                                    CAO, LIAN
: STERNE, KESSLER,
1100 NEW YORK AVE.,
                                                                                                                                                 GENTZ, REINER
BULT, CAROL J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
52..507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                  ication US/08467948A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19910123
                                                                                                                                                                                                            LIANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.4%;
51.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/07/644,372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 71.8; DB 1;
Pred. No. 5.8e-10;
GOLDSTEIN & FOX P.L.L.C. NW, SUITE 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches 202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 822;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                            G-Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; NAME/KEY:
; LOCATION:
US-08-467-948A-3
                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-467-947A-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 5.5%;
Best Local Similarity 90.9%;
Matches 50; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 202-371-2540
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                      COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PATENTIN RELEASE #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2072 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGGTTGGGTTGAG 2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 30-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 06-JUN-
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic a STRANDEDNESS: b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 202-371-2540
APPLICATION NUMBER:
                                                                                                                                         STATE:
                                                                                                                                                        CITY:
                                                                                                                                                                   ADDRESSEE: STERNE, KES
STREET: 1100 NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 36 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: WASHINGTON
                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTAGAACTAGTGGATCCCCCGGGCTGCÅGGAATTCAGCACGAGGTTTGTTCAAG 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                       3, Application US/08467947A
5. 6090575
                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                    WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20005
                                                                                                          20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STEFFE, ERIC K.
                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2185 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                     CAO,
                                                                                                                                                                                                                                                                 ROSEN, CRAIG A.
                                                                                                                                                                                                                                                                            GENTZ, REINER
BULT, CAROL J.
SUTTON III, GRANGER G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SYSTEM: PC-DOS/MS-DOS PATENTIN RELEASE #1.0,
                                                                                                                                                                                                                                                                                                                          NI, JIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
884..2062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      both
                                                                                                                                                                                                                                                                                                                                           LIANG
                                                                                                                                                                                                                               Polynucleotides Encoding Human G-Protein Coupled Receptor GPR1
                                                                                                                                                                   KESSLER, GOLDSTEIN & FOX P.L.L.C
DRK AVE., NW, SUITE 600
US/08/467,947A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT/US95/04079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/467,948A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36,688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1488.1140003/EKS/KLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 47; DB 2; Pred. No. 0.003; 0; Mismatches
                             VERSION #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

0;

```
;
US-08-467-947A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-485-455D-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 60,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                 TELEFAX: (303) 863-0223 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tent No.
                                               REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SEQUENCE CHARACTERISTICS:
                                                                                             FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,0
                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2072 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGGTTGGGTTGAG 2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 30-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                  CITY: Denver
                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 07-JUI
                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: STEFFE, ERIC K. REGISTRATION NUMBER:
                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAG 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION DATA:
                                                                                                                                                                                                                                                                                                   80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ), Application US/08485455D 5712143
                                                                                                                                                                                                                                                                                                                                 Colorado
                                                                                                                                                                                                                                                                                                                                                              E: Sheridan Ross P.C. .
1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2185 base pairs
                                                                                                                                                                                                                                                                                                                OSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
884..2062
                                                                                                                                                                                                                 PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Glenn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                               FLEA PROTEASE PROTEINS, NUCLEIC ACID MOLECULES, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT/US95/04079
                                                                                                                                                                                 US/08/485,455D
                                                                                               32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36,688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                2618-25-C1-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 47;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1488.1140002/EKS/KLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ų.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
; NAME/KEY: CDS
; LOCATION: 1...
US-08-482-130C-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-485-455D-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-482-130C-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Query Match
Best Local Similarity
                                                                                                                                                                               TELEFAX: (303) 863-02: INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                  FEATURE:
                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                          CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       108 GCGCGTCTCATCTTACAAGATA 129
                                                                                                            STRANDEDNESS:
TOPOLOGY: li
                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/482,130C FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48
                                                                                                                                                                                                                                                  REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                          TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ટ 60,
5962
૧૧૪
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Denver
: Colorado
                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                 Connell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08482130C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1700 Lincoln Street, Suite 3500
                                                                                                                                                    234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLIEVE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Frank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grieve, Robert B. Rushlow, Keith E.
                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sheridan Ross P.C.
                                                                                                                                                                                                           (303) 863-9700
                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                            Gary J.
                                                                                                                                                                                             863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73.2%;
 5.5%;
73.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULES, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FLEA PROTEASE PROTEINS, NUCLEIC ACID
                                                                                                                                                                                                                                                32,020
                                                                                                                                                                                60:
                                                                                                                                                                                                                                      2618-25-C1-1
Score 46.8; DB 2
Pred. No. 0.0015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 46.8; DB 1
Pred. No. 0.0015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
              DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22;
            Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Conservative

Mismatches

Indels

0;

Gaps

```
RESULT 9
US-08-906-769-60
; Sequence 60, Application US/08906769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                   밁
                                                                                                             δÃ
                                                                                                                                             밁
                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                US-08-484-211C-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-484-211C-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (303) 863-0223 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION: NAME: Connell, Gary J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UMBER OF SEQUENCES:
                                                                                   108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 1700 I
CITY: Denver
STATE: Colorac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            108 GCGCGTCTCATCTTACAAGATA 129
                                                                                                           61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                           48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/484,211C FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                            NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                    Local Similarity 73.2 es 60; Conservative
                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                           1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                   GCGCGTCTCATCTTACAAGATA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGCGTTTGGTTTGGATTGA 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80203
                                                                                                                                                                                                                                                                                                                                                                 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08484211C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Sheridan Ross P.C.
1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                             234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Frank, Glenn R.
                                                                                                                                                                                                                                                                           1..234
                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                         863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULES, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FLEA PROTEASE PROTEINS, NUCLEIC ACID
                                                                                                                                                                                                                  5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gary L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2618-25-C1
                                                                                                                                                                                                 Score 46.8; DB 2
Pred. No. 0.0015;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USES THEREOF
                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                    22;
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                    0;
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                   0
                                                                                                                                                                                     멁
                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
```

```
RESULT 10
US-08-906-616-60
                                                                                                                                                                                                                                                                                                                                                  US-08-906-769-60
                                                                        Sequence 60,
Patent No. 6
                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (303) 863-02
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/906,769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Silver, Gary TITLE OF INVENTION: FLE TITLE OF INVENTION: MOL
                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION UMBER: US 08/639,075
FILING DATE: 24 APR-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                             APPLICANT:
                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
CITY: D
                                                                                                                                                                                                                            48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Connell, Gary J. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                             61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH:
                                                                                                                                                                                                                                                         TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                GCGCGTCTCATCTTACAAGATA 129
                                                                                                                                                                                                                            60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Colorado
                                                                                     Application US/08906616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaines, Patrick J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GITEVE,
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rushlow, Keith E.
            Wu Hunter, Shirley
                         Rushlow,
                                          Grieve,
                                                                                                                                                                                                                                                                                                                                                               CDS
1..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sheridan Ross & McIntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glenn R.
                          Robert B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FLEA PROTEASE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                   5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             32,020
                                                                                                                                                                                                                                                                                  Score 46.8; DB 3;
Pred. No. 0.0015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2618-25-C2
                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                     Gaps
```

0;

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                           US-08-817-795-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
US:08-906-616-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (303) 863-0223 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                ENERAL INFORMATION:
                                                                                                                                                                                                                                                                tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 26
REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS LENGTH: 234 base pair:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION: NAME: Connell, Gary J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                         APPLICANT:
                                                                                                                         APPLICANT
                                                                                                                                          APPLICANT:
                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                         ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                      108 GCGCGTCTCATCTTACAAGATA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Connell, Gary J. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Colorado
                                                                                                                                                                                                                                                                          Application US/08817795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Sheridan Ross P.C.
1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           234 base pairs
                                    Stiegler, Gary
FENTION: USE OF PROTEASE INHIBITORS AND
FENTION: PROTEASE VACCINES TO PROTECT ANIMALS FROM FLEA
FENTION: INFESTATION, AND FLEA PROTEASE PROTEINS, NUCLEIC ACID
VENTION: THE TREE THEREOF
                                                                                                                                                                                       Rushlow, Ker...
Winter, Shirley Wu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaines, Patrick J.
Silver, Gary
                                                                                                                                                                                                                Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                       Aristen, Ann
                                                                                                                                                     Yamaka, Miles Yamanaka
Sheridan Ross & McIntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                     Beverly
                                                                                                                                                                     Andrew W
                                                                                                                                                                                     Glenn R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.5%;
73.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FLEA AMINOPEPTIDASE PROTEINS AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/906,616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 46.8; DB 3;
Pred. No. 0.0015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2618-25-C2-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                            ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
```

```
US-08-485-443B-60
                                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-817-795-60
                                                                                                                                                                                                                                                                 Sequence 60, Appli
Patent No. 6146870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (303 863-0223 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                  TITLE OF
                                                                                                                                                                CITLE OF INVENTION:
                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                             PPLICANT:
                                                                                                                                                                                                                                                                                                                                                        108 GCGCGTCTCATCTTACAAGATA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
CITY: D
                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                  61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                            COUNTRY:
                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60;
                              80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Denver
                                                                         DENVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gary J.
                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Colorado
                                                                                                                                                                                                                                                                                Application US/08485443B
                                                                                     1700 LINCOLN ST.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1700 Lincoln Street, Suite 3500
                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                234 base pairs
                                                                                                                                                                            Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (303 863-0223
                                                                                                                                                                                                       Hunter,
                                                                                                                                                                                                                        Rushlow,
                                                                                                                                                                                                                                       Grieve,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                             Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                       SHERIDAN ROSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Connell
                                                                                                                                                                                                         , Robert B.
w, Keith E.
, Shirley Wu
                                                                                                                                    , Gary L.
FLEA PROTEASE PROTEINS, NUCLEIC ACID
MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.5%;
73.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/817,795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT/US95/14442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                        SUITE 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 46.8; DB 3
Pred. No. 0.0015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

CURRENT APPLICATION DATA:

SOFTWARE: PatentIn Release #1.0, Version #1.30

APPLICATION NUMBER:

US/08/485,443B

0,

```
Бр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-485-443B-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-639-075A-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 303 863-0223 INFORMATION FOR SEQ ID NO:
                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/639,075A
FILING DATE: 24-APR-1996
                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 234 base pairs
TYPE: nucleic acid
                           ATTORNEY/AGENT INFORMATION: NAME: Connell, Gary J.
                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELLEPHONE: 303 863-9700
TELEFAX: 303 863-0223
                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                              APPLICANT: Silver, Gary ITTLE OF INVENTION: FLEW ITTLE OF INVENTION: MOLUMBER OF SEQUENCES: 190
                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108 GCGCGTCTCATCTTACAAGATA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 424
                                                                                                                                                                                           COUNTRY: U
ZIP: 80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Connell, Gary L. REGISTRATION NUMBER: 32,020
            NAME: Connell, Gary J
REGISTRATION NUMBER:
                                                        CLASSIFICATION:
                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60;
                                                                                                                                                                                                                    T: 1700 Lincoln Street, Suite 3500
Denver
Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08639075A
                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                  Wu Hunter, Shirley Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                     Gaines, Patrick J.
                                                                                                                                                                                                                                                                                                                                                                      Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                              Sheridan Ross & McIntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.5%;
                                                                                                                                                                                                                                                                                                           MOLECULES
                                                                                                                                                                                                                                                                                                         FLEA PROTEASE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                     Gary
                                                                                                                                                                                                                                                                                              190
          32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2618-25-C1-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 46.8; DB 3
Pred. No. 0.0015;
2618-25-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-639-075A-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-012-431-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 60,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                               INFORMATION FOR SEQ ID NO: 60: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              108 GCGCGTCTCATCTTACAAGATA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ropology:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH:
                                                                                                                                                   APPLICATION NUMBER: US 08/639,075
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/012,431
FILING DATE: 23-Jan-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                               TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                   NAME: Connell, Gary J. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIP: 80203
                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: Colorado
                                                                                                                   REFERENCE/DOCKET NUMBER: 2618-25-C2
                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Sheridan Ross & McIntosh
STREET: 1700 Lincoln Street, Suite 3500
LENGTH: 234 base pairs
TYPE: nucleic acid
                                                                 TELEFAX: (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF INVENTION: FLEA PROTEASE PROTEINS, NU MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09012431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaines, Patrick J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Silver, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.5%;
73.2%;
                                                                   863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 46.8; DB 3; Pred. No. 0.0015;
                                                                                                                                   32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

FEATURE:

NAME/KEY: CDS LOCATION: 1... TOPOLOGY: linear MOLECULE TYPE: cDNA

0;

```
; NAME/KEY:
; LOCATION:
US-09-012-692-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; SEQUENCE DESCRIPTION: SEQ ID NO: 60: US-09-012-431-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 73.2
Matches 60; Conservative
                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/639,075
FILING DATE: 24-APR-1996
ATTORNEY/ACENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C2
REFERENCE/DOCKET NUMBER: 27000
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                              TELEFAX: (303) 863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
                                                                      OLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108 GCGCGTCTCATCTTACAAGATA 129
                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/09/012,692 FILING DATE: CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Denver
STATE: Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 AGATGTCTATAAATATAAGAGA 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Sheridan Ross & McIntosh
1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09012692
                                                                                                                                         234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Frank, Glenn R.
Stiegler, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaines, Patrick J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Grieve, Robert B. Rushlow, Keith E.
                  1..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190
                                                                                                                                                                                60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                     2618-25-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 46.8; DB 4; Length 234; Pred. No. 0.0015; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

0;

```
Page 1
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                             Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                     ဂ ဂ
                                                                                                                                                                                                                                                                                               Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9:
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                           377.6
176.8
176.8
49.2
49.2
48.2
48.2
48.2
47.8
47.6
                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-845-849-1
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         May 1, 2003, 15:58:02; Search time 156.5 Seconds (without alignments) 6463.052 Million cell updates/sec
 100.0
100.0
100.0
100.0
144.1
20.7
5.7
5.6
5.6
5.6
5.5
5.5
5.5
5.5
5.5
5.5
                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       746064 seqs, 590810554 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Published_Applications_NA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.5 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'cgn2_6,
                                                                                                                                                                                                                                                                                                                                                                                                                            /cgn2_6/ptodata/2/pubpna/US09_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US10_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US80_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US80_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                             Length
856
856
856
528
856
534
534
503
503
367
367
367
367
551
551
551
515
515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ptodata/2/pubpna/US08_PUBCOMB.seq:*
/ptodata/2/pubpna/US09_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /ptodata/2/pubpna/US07_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /ptodata/2/pubpna/US06_NEW_PUB.seq:*
/ptodata/2/pubpna/US06_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /ptodata/2/pubpna/US08_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                               В
                             10
10
10
9
9
9
                                                                                                                                                               9010
          US-09-291-809C-1
0 US-09-291-809C-3
0 US-09-845-849-3
10 US-09-845-849-3
10 US-09-938-842A-2635
US-09-938-842A-2635
US-09-938-842A-380
US-10-092-154-380
US-10-092-154-380
US-10-097-64-847-380
US-09-764-860-248
0 US-09-764-860-248
0 US-09-764-863-303
0 US-09-764-863-303
0 US-09-764-861-404
0 US-09-764-891-404
                                                                                                                                                                                                                                                                                               Ħ
                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1492128
       Sequence 1, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 335, Ap
Sequence 1501, Ap
Sequence 6398, Ap
Sequence 380, App
Sequence 380, App
Sequence 248, App
Sequence 248, App
Sequence 303, App
Sequence 404, App
Sequence 404, App
Sequence 2323, App
Sequence 270, App
Sequence 270, App
                                                                                                                                                                                                                                                                                             Description
```

0;

```
Sequence 3, Application US/09291809C
Patent NO. US20010049831A1
GENERAL INFORMATION:
APPLICANT: Detlef Weigel
APPLICANT: Detlef Weigel
TITLE OF INVENTION: FLOWERING LOCUS T (FT) A
TITLE OF INVENTION: MODIFIED PLANTS HAVING M
FILE REFERENCE: SALKINS.026CP1
CURRENT APPLICATION NUMBER: US/09/291,809C
CURRENT FILING DATE: 1999-04-14
PRIOR APPLICATION NUMBER: PCT/US99/08151
PRIOR APPLICATION NUMBER: PCT/US99/08151
PRIOR APPLICATION NUMBER: 09/060,726
PRIOR FILING DATE: 1999-04-15
PRIOR FILING DATE: 1999-04-15
SOFTMARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                        RESULT 2
US-09-291-809C-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
      -60-Sn
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                       QY
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
   SOFTWARE: FASTSEQ for W
SEQ ID NO 3
LENGTH: 856
TYPE: DNA
ORGANISM: Arabidopsis t
US-09-291-809C-3
                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                       TATAAGTGTGTAATAAAAATGAGAGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                                                                                                                                                                                                                                                                                                                                       CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                           AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCGTGTTTATATTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
               thaliana
                                                                                                                                                                                                                                                                                     856
                                                                                                                                                                                                                                                                 856
                                                                                                                                                T (FT)
                                                                                                                                                  AND GENETICALLY MODULATED FLOWER
                                                                                                                                                  DEVELOPMENT
                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
RESULT 3
US-09-845-849-1
US-09-845-849-1
; Sequence 1, Application US/09845849
; Patent No. US20020029395A1
; GENERAL INFORMATION:
; APPLICANT: THE SALK INSTITUTE FOR I
; APPLICANT: WEIGEL, Detlef
                                                                                                                                                        Š
                                                                                                             Ş
```

```
밁
                                                                                                      δÃ
                                                                                                                                  δÃ
                                                                                                                                                                                                                                            멍
 밁
                                                           밁
                                                                       Ωy
                                                                                         밁
                                                                                                                      밁
                                                                                                                                                   밁
                                                                                                                                                                 Ş
                                                                                                                                                                                 밁
                                                                                                                                                                                             δõ
                                                                                                                                                                                                              g
                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 856
                                                            136
                                                                                                        661
                                                                                                                       256
                                                                                                                                     601
                                                                                                                                                   316
                                                                                                                                                                  541
                                                                                                                                                                                 376
                                                                                                                                                                                                481
                                                                                                                                                                                                               436
                                                                                                                                                                                                                                             496
                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                          556
                                                                                                                                                                                                                                                                                                       616
                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                    676
                                                                          721
                                                                                         196
                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                736
                                                                                                                                                                                                                                                                                                                                                                               121
                                            781
                                                                                                                                                                                                                                                                                                                                                                                              796
                              76
                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                          CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                                        CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA
                                                                                                                                                   AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                              CCTTTGGCAATGAGATTGTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                     GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                        ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                            CCTTTGGCAATGAGATTGTGTTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                      AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                 AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                    GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG
                                                                                                                                                                                                                                                                                                                                                                                              AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        al Similarity
856; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
-
              856
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 856; DB 10
Pred. No. 9e-206;
Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                              17
                                            840
                                                                                         137
                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                677
                                                           77
                                                                          780
                                                                                                                       197
                                                                                                                                     660
                                                                                                                                                   257
                                                                                                                                                                  600
                                                                                                                                                                                 317
                                                                                                                                                                                                540
                                                                                                                                                                                                               377
                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                            437
                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                          497
                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                    617
                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                              737
                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                            797
                                                                                                                                                                                                                                                                                                                                                                                                                                         60
```

BIOLOGICAL

```
Qy
                                                                                                                                                                                                                                                                                                                                          ٧٥.
                                                                                                                                                                                                                                                                                                                                                                                                    Qy-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                           δã
                                                                         В
                                                                                              Qy
                                                                                                                      밁
                                                                                                                                              Ş
                                                                                                                                                                          В
                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
δõ
                        В
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-845-849-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 1
LENGTH: 856
TYPE: DNA
ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/845,849 CURRENT FILING DATE: 2001-10-12 PRIOR APPLICATION NUMBER: 09/060,726 PRIOR FILING DATE: 1998-04-15 NUMBER OF SEQ ID NOS: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: KARDAILSKY, IGOT
TITLE OF INVENTION: FLOWERING LOCUS T (FT) &
TITLE OF INVENTION: MODIFIED PLANTS HAVING
FILE REFERENCE: SALKINS.026DV1
                                                                                                                           601
                                                                                                                                                    601
                                                                                                                                                                             541
                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
mes 856; Conserv
                                    TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTATATAGTG 780
                                                                                     TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTAGTTCAATA
                                                                                                                                     CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                       CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                           CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCAGGAACTTCTATACTTTTGGTTATGGTTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
CCTTTGGCAATGAGATTGTGTTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                                                                                                                                                                                                             CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCCGTTTAATAGATCAATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                       TATAAGTGTGTAATAAAAATGAGAGGGGGAGGAAAATGAGAGTGTTTTACTTATATAGTG
                                                                         TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA
                                                                                                                         CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                                                                                                                                                                                                                                                   AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCCTTCCCGTGGCCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T (FT) AND GENETICALLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9e-206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MODULATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FLOWER DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                  720
                                                                                                                                                 660
                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                         720
                                                                                                                        660
                                                                                                                                                                          600
                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
Qy
                                      밁
                                                            δÃ
                                                                                      밁
                                                                                                          ρy
                                                                                                                                      밁
                                                                                                                                                            Ωy
                                                                                                                                                                                      밁
                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                        뭥
                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 4
US-09-845-849-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-845-849-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/845, CURRENT FILING DATE: 2001-10-12 PRIOR APPLICATION NUMBER: 09/060,726 PRIOR FILING DATE: 1998-04-15 NUMBER OF SEQ ID NOS: 13 SOFTWARE: FastSEQ for Windows Version SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: THE SALK INSTITUTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3, Application US/09845849 Patent No. US20020029395A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: WEIGEL, Detlef APPLICANT: KARDAILSKY, IGOT TITLE OF INVENTION: FLOWERING TITLE OF INVENTION: MODIFIED FILE REFERENCE: SALKINS.026DV1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 856
              541
                                        376
                                                               481
                                                                                        436
                                                                                                               421
                                                                                                                                       496
                                                                                                                                                                                       556
                                                                                                                                                                                                                301
                                                                                                                                                                                                                                        616
                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                        676
                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                        736
                                                                                                                                                                                                                                                                                                                                                                                                                                       856 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hes 856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                         796
                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTT
                                     AGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGAG
                                                                                     TCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCC 480
                                                                                                                                                                                                   CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA 360
                                                                                                                                                                                                                                                   ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                                     GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                                                                                                                                                                                                                     CCTTTGGCAATGAGATTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG 420
                                                                                                                                                                                                                                                                                                                                        AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTG
                                                                                                                                                                                      CTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAA
                                                                                                                                                                                                                                       ACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACC
                                                                                                                                                                                                                                                                                        GCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAG
                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 856; DB 10
Pred. No. 9e-206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HAVING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (FT) AND GENETICALLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MODULATED FLOWER DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STUDIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                      317
                                                              540
                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                        617
                                                                                                                                                                                                                                                                                                                                        677
                                                                                                                                                                                                                                                                                                                                                                                                                                        797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                       437
                                                                                                                                                                                       497
                                                                                                                                                                                                                                        557
                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
Ş
                                                                    Q
                                                                                                  밁
                                                                                                                      δÃ
                                                                                                                                                 В
                                                                                                                                                                       Š
                                                 밁
                                                                                                                                                                                               밁
                                                                                                                                                                                                                    Ş
  밁
                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-938-842A-2635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                               Query Match
Best Local Simi
Matches 434;
                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: 5379
SEQ ID NO 2635
LENGTH: 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S-09-938-842A-2635
Sequence 2635, Application US/09938842A
Patent No. US20020160378A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2000-08-24
                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/264,647 PRIOR FILING DATE: 2001-01-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: STRESS-REGULATED GENES OF TITLE OF INVENTION: SAME, AND METHODS OF USE FILE REFERENCE: SCRIP1300-3
  241
                                                   181
                                                                        243
                                                                                                   121
                                                                                                                          183
                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              316
                                                                                                                                                  61
                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76
                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16 AAAAAAAAAACTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTAATAACCATTTTATGATACGAGTAACGAACGGTGATGATGCCTATAGTAGTTCAATA
CTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAACCCT
                                                                                                            TTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAAGAC
                                                                                                                                                            CCGTTTAATAGATCACTCTAAAGGTTACTTATGGCCAAAGAGAGGTGACTAATGGC 182
                                                                                                                                                                                                          ATGTCTATAAATATAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGAT 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTTTATAACCAATTGATATTGCATACTCTGATGAGATTTATGCATCTATAGTATTTTAA
                      CACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACAACC
                                                TTCAGAAATTTCTACACCTTGGTTATGGTGGATCCAGATGTGCCGAGTCCAAGCAACCCT
                                                                                               CCTTTCACGAGGTTGGTCTCTTTAAGGTCACTTATGGCCATAGAGAGGTTACTAATGGC
                                                                                                                                                                                               ATGTCTTTAAGTCGTAGAGATCCTCTTGTGGTCGGCAGTGTTGTTGGAGATGTTCTTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAAAAAACTCGAG 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAGATGGCTTCTT
                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                             44.1%; Score 377.6; DB 9; 82.2%; Pred. NO. 2.1e-85; 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLANTS, TRANSGENIC PLANTS CONTAINING
                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           137
                        362
                                                                       302
                                                                                                                                                                                               60
 300
                                                240
                                                                                                180
                                                                                                                       242
                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           257
                                                                                                                                                                                                                                              0,
                                                          밁
                                                                                δÃ
                                                                                                           밁
                                                                                                                                δÃ
                                                                                                                                                          B
                                                                                                                                                                               Qy
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
```

ACCTTTGGCAATGAGATTGTGTGTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGT 419

ACGTTTGGCAAAGAGGTGGTGAGCTATGAATTGCCAAGGCCAAGCATAGGGATACATAGG

366

CCTCACCTCCGAGAATATCTCCATTGGTTGGTGACTGATATCCCTGCTACAACTGGAACA 359 GATCTCAGATCCTTCTTCACTTTGGTGATGATAGACCCAGATGTTCCAGGTCCTAGTGAC GACCTCAGGAACTTCTATACTTTGGTTATGGTGGATCCAGATGTTCCAAGTCCTAGCAAC

CCCTTTCTAAAAGAACACCTGCACTGGATCGTTACAAACATTCCCGGCACAACAGATGCT

306

246 299 120

67

GATTTCTTCACTCCAACCAACTAAGATGAATGTTAGTTATAACAAGAAGCAAGTCTCCCAAT

GGCCATGAGCTCTTTCCTTCTTCTGTTTCCTCCAAGCCTAGGGTTGAGATCCATGGTGGT 186 GGCTTGGATCTAAGGCCTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGATTGGTGGAGAA

```
; ORGANISM: Arabidopsis thaliana US-09-938-842A-1501
                                                                                                                                                                                                                                                                                                                APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
APPLICANT: Zhu, Tong
TITLE OF INVENTION: STRESS-REGULATED GENES OF PL
TITLE OF INVENTION: SAME, AND METHODS OF USE
FILE REFERENCE: SCRIP1300-3
CCURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2000-08-24
PRIOR FILING DATE: 2000-08-24
PRIOR APPLICATION NUMBER: US 60/264,647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
US-09-938-842A-1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ.
                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
SEQ ID NO 1501
LENGTH: 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                       Matches
                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1501, Application Patent No. US20020160378A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       363
                            60 AAGATGTCTATAAATATAAGAGACCCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTT 119
                                                                                                               Local Similarity
  7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTACAATTGTCAGAGGGAGAGTGGCTGCGGAGGAAGAAGACTTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTTCAACACTCGCGAGTTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCCGCAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTGGCAATGAGATTGTGTGTTTACGAAAATCCAAGTCCCACTGCAGGAATTCATCGTGTC
  AATATGGGAACTAGAGTGATAGAGCCATTGATAATGGGGAGAGTGGTAGGAGATGTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACTTCAACTGCCAGAGGGAGAATGGCTGTGGGGGAAGAAGAACGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGTTCAACACTCGTGAGTTTGCTGAGATCTACAATCTTGGTCTTCCTGTGGCTGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGCACCAGGGTGGCGCCAG 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGTTGGTATTGTTCCGGCAACTCGGAAGACAAACGGTTTATGCACCGGGGTGGCGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          308;
                                                                                       Conservative
                                                                                                             20.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09938842A
                                                                                       <u>.</u>
                                                                                                             Score 176.8; DB 9
Pred. No. 7.8e-35;
                                                                                       Mismatches 197;
                                                                                                                                  DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLANTS, TRANSGENIC PLANTS CONTAINING
                                                                                       Indels
                                                                                                                                Length 534;
                                                                                       ω
--
                                                                                       Gaps
66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                       ۲.
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
US-09-878-574-6398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                      US-10-092-154-380
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: DNA
; ORGANISM: Glycine max
; OTHER INFORMATION: Clone ID: 701098321H1
US-09-878-574-6398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
SEQ ID NO 380
LENGTH: 503
TYPE: DNA
                                                                                                                                                                                                                        Sequence 380, Application US/10092154 Publication No. US20030054375A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 6398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6398, Application Patent No. US20020110548A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Byrum, Joseph R.
APPLICANT: La Rosa, Thomas J.
APPLICANT: Thompson, Michael D.
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated with
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(15401)B
CURRENT APPLICATION NUMBER: US/09/878,574
CURRENT APPLICATION NUMBER: 09/333,535
PRIOR APPLICATION NUMBER: 09/333,535
PRIOR FILING DATE: 1999-06-14
NUMBER OF SEQ ID NOS: 15775
                                                           NUMBER OF SEQ ID NOS: 2003 Prior Application removed SOFTWARE: PatentIn Ver. 2.
                                                                                                                         CURRENT APPLICATION NUMBER: US/10/092,154
CURRENT FILING DATE: 2002-03-07
                                                                                                                                                               APPLICANT: Rosen et al. TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: PC009C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                          157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          136 CAATCACTCTAAAGGTTACTTATGGCCAAAGAGGGTGACTAATGGCTTGGATCTAAGGC 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                         217 ATACCTTGATCATGACTGACCCAGATGCTCCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                               256 ATACTTTGGTTATGGTGGATCCAGATGTTCCAAGT 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           196 CTTCTCAGGTTCAAAACAAGCCAAGAGTTGAGAGTTGGTGGAGAAGACCTCAGGAACTTCT 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             427 AGAGATCACTTCAACACTCGTAAATTTGCGGTCGAGTATGATCTTGGTCTCCCTGTCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420 GTCGTGTTTATATTGTTTCGACAGCTTGGCAGGCAAACAGTGTATGC---ACCAGGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76 TAAGAGACCCTCTTATAGTAAGCAGAGTTGTTGGAGACGTTCTTGATCCGTTTAATAGAT 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGTTTTCTACAATTGTCAGAGGGAGA 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCGTCTTCTTTAACGCACAAAGAGAAA 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTCTACTATTATGGGCAAGCCACGCGGTGAGATTTGTGGTGATGACATGAGGACTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGAAAAATGAATGTGACATATTCCACCAAGCAAGTTGCCAATGGTCATGAGGTAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCATGGAACCACTTGTTGTGGGAAGAGTGATAGGAGAAGTGGTCGACATTTTCAGCCCAA 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCAGAACTTCAACACTCGCGAGTTTGCTGAGATCTACAATCTCGGCCTTCCCGTGGCC 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTGTGTTTGTTCTGTTCAGGCAGAAGCAAAGACGTGTTATCTTTCCTAATATCCCTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                               removed -
n Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/09878574
                                                                              See File Wrapper or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 74.2; DB 1
Pred. No. 3.7e-09
0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                         251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
; OTHER INFORMATION: n equals US-10-092-154-380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                 Ωy
                                                                                                          ; OTHER INFORMATION: n equals a,t,g, or US-09-764-847-380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-764-847-380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Rosen et al.
                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 380, Application US/09764847 Patent No. US20020132767A1
                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn
SEQ ID NO 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                       LENGTH: 503
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 2003 SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Nucleic Acids, Proteins, FILE REFERENCE: PC009 CURRENT APPLICATION NUMBER: US/09/764,847 CURRENT FILING DATE: 2001-01-17
                                                                                                                                       OTHER INFORMATION: n
NAME/KEY: SITE
LOCATION: (503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (502)
OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: (20)
OTHER INFORMATION: n equals a,t,g, or
                                                                                                                                                                                                                LOCATION: (54)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                    NAME/KEY: SITE
LOCATION: (502)
                                                                                                                                                                                                                                               NAME/KEY: SITE
                                                                                                                                                                                                                                                                OTHER INFORMATION: n
                                                                                                                                                                                                                                                                               NAME/KEY: SITE LOCATION: (29)
                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                           NAME/KEY: SITE
LOCATION: (20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature LOCATION: (503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (54)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc_feature LOCATION: (29)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    136 TGGGGTTTTT 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 AGATGTCTAT 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGTTTTATTTTAATTTTTA 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
57; Conserv
                                               . Similarity 57; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                               Conservative
                                                                                                                                                                                                                    =
                                                                                                                                                                     equals a,t,g,
                                                                                                                                                                                                                                                               equals a,t,g,
                                                                                                                                                                                                                equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.7%;
                                                            5.7%;
                                                                                                                                                                                                                  a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                           Score 49.2; DB Pred. No. 0.01;
                                           Pred. No. 0.0:
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 49.2; DB Pred. No. 0.01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                     Or.
                                                                                                                                                                                                                                                               Or.
                                                                                                                                                                                                                                                                                                             or
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Or.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or
                                                                                                                                                                                                                    ဝူ
                                                                            DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                               Indels
                                                                          Length 503;
                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 09/764,860 PRIOR FILING DATE: 2001-01-17 PRIOR APPLICATION NUMBER: 60/179,065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT FILING DATE: 2002-02-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: PC008C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT: Rosen et al.
ITLE OF INVENTION: Nucleic Acids, Proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76
                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/234,223 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/234,274
                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2000-08-14
APPLICATION NUMBER: 60/
FILING DATE: 2000-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 2000-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/216,647
FILING DATE: 2000-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-08-14
APPLICATION NUMBER: 60/218,290
EILING DATE: 2000-07-14
APPLICATION NUMBER: 60/225,757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-07-11 APPLICATION NUMBER: 60/225,447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 2000-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 2000-01-31 APPLICATION NUMBER: 60/180,628
                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 2000-08
                                                                                                                                                                                                               APPLICATION NUMBER: 60/: FILING DATE: 2000-08-30
                                                                                                                                                                                                                                                                                FILING DATE: 2000-09-
                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/226,868 FILING DATE: 2000-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
 FILING DATE:
                                                APPLICATION NUMBER: 60/241,809 FILING DATE: 2000-10-20
                                                                               FILING DATE:
                                                                                                               APPLICATION NUMBER: FILING DATE: 2000-08
                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/225,270 FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/217,487
                                 APPLICATION
                                                                                                APPLICATION NUMBER:
                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGGTTTTT 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGATGTCTAT 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGTTTTATTTTAATTTTTA 135
                                             2000-10-20
                                                                                  2000-07-26
                                                                                                                2000-08-14
                                                                                                                                                2000-09-29
                                                                                                                                                                                2000-08-14
                                                                                                                                                                                                                                                                                                                                             2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-06-28
                                                                                                60/220,964
                                                                                                                                60/224,519
                                                                                                                                                                60/236,369
                                                                                                                                                                                              60/224,518
                                                                                                                                                                                                                              60/228,924
                                                                                                                                                                                                                                                                                                                            60/235,834
                                                                                                                                                                                                                                                                                                                                                           60/251,869
                                                                                                                                                                                                                                                                                                                                                                                                                           60/216,880
                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/225,267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/217,496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/220,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/225,758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/214,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Antibodies
                                               PRIOR
PRIOR
                                                                               PRIOR
                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                              PRIOR
                                                                             R APPLICATION R FILING DATE:
                                                                                                                                                                                                                                                FILING DATE: 2000-11-VG APPLICATION NUMBER: 60/249,216
APPLICATION NUMBER: 60/249,216
APPLICATION NUMBER: 60/249,216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2000-09-29
APPLICATION NUMBER: 60/237,039
FILING DATE: 2000-10-02
APPLICATION NUMBER: 60/237,038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-10-20
APPLICATION NUMBER: 60/244,617
FILING DATE: 2000-11-01
APPLICATION NUMBER: 60/225,268
                                                                                                                                                              APPLICATION N
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/239,937
FILING DATE: 2000-10-13
APPLICATION NUMBER: 60/241,787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2000-09-01
APPLICATION NUMBER: 60/229,513
FILING DATE: 2000-09-05
APPLICATION NUMBER: 60/231,413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2000-09-01
APPLICATION NUMBER: 60/229,287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2000-09-29
APPLICATION NUMBER: 60/251,856
FILING DATE: 2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 2000-10
               FILING DATE: APPLICATION I
                                               FILING DATE: APPLICATION
                                                                                                                              FILING DATE:
                                                                                                                                               APPLICATION
                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                               APPLICATION
                                                                                                                                                                                                                              APPLICATION FILING DATE:
                                                                                                                                                                                                                                                                                                           FILING DATE: APPLICATION N
                                                                                                                                                                                                                                                                                                                                           APPLICATION
                                                                                                                                                                                                                                                                                                                                                         FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 2000-10-02
APPLICATION NUMBER: 60/237,040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/236,802 FILING DATE: 2000-10-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 2000-10-02
APPLICATION NUMBER: 60/236,370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/236,367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/229,509 FILING DATE: 2000-09-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/229,345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2000-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/234,997 FILING DATE: 2000-09-25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/229,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/251,868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                           LING DATE:
                                                                                                                                                                                                                                                                                                                                                           DATE:
NUMBER: 60/230,438: 2000-09-06
                                NUMBER: 60/
: 2000-09-27
                                                                                                                            NUMBER: 60/225,213: 2000-08-14
                                                                                                                                                            NUMBER: 60/225,759: 2000-08-14
                                                                                                                                                                                                             NUMBER:
                                                                                                                                                                                                                                             NUMBER:
                                                                                                                                                                                                                                                                                                             NUMBER: 60/246,532
                                                                                                                                                                                                                                                                                                                                           NUMBER:
                                                              2000-08-14
                                                                                                2000-08-22
                                                                                                                                                                                                                                                                                                                                                           2000-10-20
                                                                                                                                                                                            2000-08-22
                                                                                                                                                                                                                              2000-11-3
                                                                                                                                                                                                                                                                                                                           2000-11-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-10-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-10-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                           2000-10-13
                                                60/235,836
                                                                                                               60/227,182
                                                                                                                                                                                                             60/226,681
                                                                                                                                                                                                                                             60/249,210
                                                                                                                                                                                                                                                                                                                                        60/246,474
                                                                                                                                                                                                                                                                                                                                                                                                                                        60/239,935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/240,960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/237,037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/229,343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/236,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/241,785
```

FILING DATE:

APPLICATION NUMBER: 60/249,212 APPLICATION NUMBER: 60/249,213 FILING DATE: 2000-11-17 APPLICATION NUMBER: 60/249,208 APPLICATION NUMBER: 60/249,218

2000-11-17

FILING DATE:

2000-11-

FILING DATE: FILING DATE:

2000-08-

APPLICATION NUMBER:

2000-06-30

60/225,266

```
Š
                                밁
                                                             Ş
                                                                                                                          Query Match
                                 305
   61
                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                       APPLICATION NUMBER: 60/246,475
FILING DATE: 2000-11-08
APPLICATION NUMBER: 60/231,243
FILING DATE: 2000-09-08
                                                                                                                                                                                                                    APPLICATION NUMBER: 60/241,221 FILING DATE: 2000-10-20
                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/241,786
                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/241,826
                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/232,401
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/232,397
                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/233,064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/231,244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/231,242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/249,217 FILING DATE: 2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/249, 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/249,207
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/241,808
                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/233,063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/231,414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/232,080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/232,081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/249,211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/249,244
                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/232,400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/249,297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/249,214
AGATGTCTATAAATATA 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICATION NUMBER: 60/249,264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICATION NUMBER: 60/249,215
ILING DATE: 2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LING DATE:
                                                                                                           Similarity
                                                                                             Conservative
                                                                                                                                                                                                                                                   2000-10-20
                                                                                                                                                                                                                                                                                                                                                                                                          2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-11-1
                                                                                                                                                                                                                                                                                  2000-10-20
                                                                                                                                                                                                                                                                                                                2000-10-
                                                                                                                                                                                                                                                                                                                                               2000-09-14
                                                                                                                                                                                                                                                                                                                                                                             2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-11-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-11-1
                                                                                                          5.6%;
76.6%;
                                                                                                                                                                                                                                                                                                                                                                                          60/232,399
                                                                                           0;
                                                                                          Score 48.2; DB
Pred. No. 0.016;
D; Mismatches
                                                                                                                       9;
                                                                                             18;
                                                                                                                          Length
                                                                                           Indels
                                                                                           0;
                                                                                          Gaps
                                                                                           0;
```

Matches

60;

Conservative

0;

Mismatches

Indels

<u>,,</u>

Gaps

```
; FEATURE:
NAME/KEY: SITE
LOCATION: (345)
OTHER INFORMATION: n equals a,t,g,
US-09-764-860-248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
US-09-925-300-816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
US-09-764-860-248/c
                                                   US-09-925-300-816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 248
LENGTH: 367
                                                                                                                                                                                                                           SEQ ID NO 816
LENGTH: 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No. US20020151681A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 816,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 248, Application US/09764860 Patent No. US20020094953A1
Best Local Similarity
                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 367
TYPE: DNA
ORGANISM: Homo s
                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/124,270 PRIOR FILING DATE: 1999-03-12 NUMBER OF SEQ ID NOS: 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/764,860 CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Rosen et al. TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: PC008
                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/925,300 CURRENT FILING DATE: 2001-08-10 PRIOR APPLICATION NUMBER: PCT/US00/05988 PRIOR FILING DATE: 2000-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 1198
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Steve Ruben
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA101
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Craig Rosen, APPLICANT: Steve Ruben
                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver.
                                                                                                                                                NAME/KEY: misc feature
                                                                                     NAME/KEY: misc feature LOCATION: (15)
                                                                                                                      OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                           TYPE: DNA
                                                                   OTHER INFORMATION: n equals a,t,g,
                                                                                                                                       LOCATION:
                                                                                                                                                                                        ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              245 TATCTTTTATGAACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            245 TATCTTTTATGAACACA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
nes 59; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 AGATGTCTATAAATATA 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09925300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76.68;
 5.6%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 48.2; DB Pred. No. 0.016; Mismatches
 Score 48; DB 10;
Pred. No. 0.022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or
                                                                     or
                                                                                                                       or
                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                  Antibodies
                 Length 551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-764-868-303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
US-09-764-868-303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
      Matches
                                     Query Match
                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver.
SEQ ID NO 400
LENGTH: 560
                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver.
SEQ ID NO 303
LENGTH: 2585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 400, Application US/09925297 Patent No. US20020081659A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                    09-925-297-400
                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR FILING DATE: 2000-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PTE39
CURRENT APPLICATION NUMBER: US/09/764,868
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 303, Application US/09764868 Patent No. US20020168711A1
                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/124,270 PRIOR FILING DATE: 1999-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-925-297-400
                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 928
                                                                                                                                           NAME/KEY: misc feature
LOCATION: (7)
OTHER INFORMATION: n equals a,t,g,
NAME/KEY: misc feature
LOCATION: (10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prior application data removed – refer to PALM or file wrapper
                                                                                                 NAME/KEY: misc feature LOCATION: (14)
                                                                               OTHER INFORMATION: n equals a,t,g,
                                                                                                                           OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                             FEATURE:
   Local Similarity 75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 96.1 es 49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 AGATGTCTATAAATATAAGA 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGACGTCTATAGCTTTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGCAGGCATGCAGAAGGC 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.6%;
96.1%;
                   5.6%;
75.6%;
                                                                                                                                                                                                                                                                                                        2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
 Score 47.6; I
Pred. No. 0.02
0; Mismatches
    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 47.8; DB Pred. No. 0.054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                              얁
                                                                                                                                                                             ç
                                                                                                                                                                             o
                DB 10;
.028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9;
   19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2585;
                                Length 560;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Search completed: May Job time: 159.5 secs

1,

2003, 23:35:10

Дb

126 AG

```
Ş
                                          밁
                                                                         Š
                                                                                                                                                                           ; OTHER INFORMATION: n
US-09-764-891-404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
US-09-764-891-404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                       Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 10231
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 404
LENGTH: 631
TYPE: DNA
                                                                                                          Matches
                                                                                                                         Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 404,
                                                                                                                                                                                                   LOCATION: (27)
OTHER INFORMATION: n
NAME/KEY: SITE
LOCATION: (28)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Nucleic Acids, Proteins, FILE REFERENCE: PC006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Rosen et al.
                                                                                                                                                                                                                                                                                  NAME/KEY: SITE
LOCATION: (19)
OTHER INFORMATION: n equals a,t,g, or
                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                         NAME/KEY: SITE
61 AG 62
||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         124 TTCAATCTGGAAACATCA 141
                                         66 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGGAGTGATGCAGTTATA 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGGCACGAGGAATCCGGAAGAAAAG 123
                                                                       1 TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. TCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCAGCACGAGGTTTGTTCAAGATCAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGATGTCTATAAATATAA 78
                                                                                                        1 Similarity 85.5
53; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09764891 to. US20030077808A1
                                                                                                                                                                                                                                         ם
                                                                                                                                                                                         equals a,t,g, or
                                                                                                                                                                                                                                         equals a,t,g, or
                                                                                                                       85.5%;
                                                                                                           0
                                                                                                                       Score 47.6; DB Pred. No. 0.029;
                                                                                                        Mismatches
                                                                                                                                       DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Antibodies
                                                                                                        9
                                                                                                                                       Length 631;
                                                                                                        Indels
                                                                                                        0
                                                                                                     Gaps
                                                                                                      0
```

```
Post-processing: Minimum Match 0% .
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           May 1, 2003, 15:58:02; Search time 2798 Seconds (without alignments) 8903.503 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2054640 segs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ctcgagtttttttttttttt.....ggggatccactagttctaga 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-845-849-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.5 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_ov:*
gb_pat:*
gb_ph:*
gb_pl:*
gb_pr:*
                                                                                                                         em_htg_hum:*
em_htg_inv:*
em_htg_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gb_om:*
                                         em_htg_mam:*
em_htg_vrt:*
em_sy:*
                                                                                 em_htg_mus:*
em_htg_pln:*
em_htg_rod:*
                                                                                                                                                                                em_sts:*
em_un:*
                                                                                                                                                                                                                           em_pat:*
em_ph:*
em_pl:*
                                                                                                                                                                                                                                                                   em_mu: *
em_on: *
em_or: *
                                                                                                                                                                                                                                                                                                                                         em_fun:*
em_hum:*
                                                                                                                                                                                                                                                                                                                                                                       gb_ro: *
gb_sts: *
gb_sy: *
gb_un: *
gb_vi: *
gb_vi: *
em_htgo_other:*
              em_htgo_hum:*
em_htgo_mus:*
                                                                                                                                                                                                               em_ro:*
                                                                                                                                                                                                                                                                                                                            em_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4109280
```

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

H 0	RESULT 1 AR148907 LOCUS DEFINITION ACCESSION VERSION KEYWORDS		4 4 5 4	43	4.4	4 (4	c 38 1	36	3 3 4	336	υ μ·	30 30	28	26	NN	23	2 2 2 1	N F	18	17	15	14	12	~ +	ှိ ဖ		•		د د	1 N P	Result No. S
Unk Unc 1 Wei Flc mod	AR148 V Seque AR148 AR148		45. 13	46.	54	57 5	th o	16	6.	<u>.</u> د	168.8	∞ ⊦-	. 4	76.	76. 76.	18	20.	25.	3 8	39.	48.	48.	74.	77.	46	9.1	ან	35.	2 6	856	core
wn. wn. ssifi ssifi ases l,D. ring ring ated t: Us	3907 3907 3907		5.7	7.	0 00 1	ω α	, α	9	4 6	9 4	999	٥.	0:	0.0	0.	1.	ა თ	5.	۲, ۲		9.0	9:		4.	η. ω	<u>.</u>	- 5	74.3	٥		% Query Match I
d. to 85 nd Kar ocus 1 lower 622553	from p GI:15		4377 354	558	560	1295	902	97	0	559	886	950 597	954	668	668 668	969	988 988	1078	866	1004	847	899	528	528	N	20	559	780	0 00	856 855	Length
6) dai (F dev	ate		ထထ	ω ο	000	בא α	σα	000	œ σ	œ c	v 00 u	co co	0000	ν œ	თ თ	0	ת מ	σ 0	nœ	σ 0	0 00	σ,	o 0	œ a	ο ω	& c	n œ	o	ο α	900	DB
Sky,I.) and genetically lopment 3 01-MAY-2001;	856 bp DNA nt US 6225530.	₽	1 7 - 1	4-0	4.0	25	AF143239 AX478009	; ⊞	F9	96	065	159 024	0	77	57	m 1	78	799	06267	804	05294	47800	9868	AF152907	5209	5114	Y1338	0275	A08272	שש	ID
modified plants having	linear PAT 08-AUG-2001		834 Ar 45262	145261 Nicot	45260 Nicotia	F159883	78009 Sequence	61553 Arabidop	78011 Sequence 80253 Arabidop	09651	5211 Arab	9882 4715	6419 Loli	74 Arabidops	77991 530 S	478027	47803 47803	7997	2676	8049 Sequenc	2943	8001	86 Method	907	2096 Arab	122	133813 Arabidop	275	V065378 Arabidop	R148907 Sequence R148906 Sequence	Description

RESULT 2		QY 841 ATCCACTAGTTCTAGA 856 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		QY /81 ATATTATAGACATCTTGARCATACAACAACCTCGTGCTGAATTCCTGCAGCCCGGGGG 840	701 . TO 1 . TO	\(\) \(\)	701	WY DOLLANDALICAMBECATIANTICACCICITTINGCCATANATANCCITTINGAGIIGAIT /20	. CC1 CCCCEMACACCOCACACCOCACACCACCACCACCACCACCACCACC	\(\text{V} \) \(\te	CO1 TYPE AND THE CONTROL OF THE CONT	THE TATTO TO SHOW TO A SHOW THE TAY OF THE TATTO TO A SHOW THE TAT	NOMEDITATION CONTRACTOR TO THE PROPERTY OF THE		81 — АТОТОАТТООСА АДОСТТОТТОСТТОТТОО В СОВСТВОТО В СОВСТВОТО В СОВСТВОТО В СОВСТВОТО В СОВСТВОТО В СОВСТВОТО В		421 AACAATATAAACACGACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA		61 CGAGTGTTGAAGTTCTGGCGCCCCCCTGGTGCATACACTGTTTGCCTGCC	ω (301 TC AC ACTTCT ACAAAACTCCCCCCCCCCCCCCCCC		41 CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC		181 ТААААТGGTTАТТААААТТААААТАСТАТАСАТСАТАААТСТСАТСАСТАТССАСТАТССА		1 TTATTACACACTTATATATTGAACTACTATAGGCATCATCACCGTTACTCGTACTCGTATCA	Db 61 TAATTATCGCATCACACACTATATAAGTAAAACACTCTCATTTTCCTCCCCCCCTCTCATTT 120	QY 61 TAATTATCGCATCACACACTATATAAGTAAAACACTCTCATTTTCCTCCCCCCTCATTT 120	Oy 1 CTCGAGTTTTTTTTTTTTTTTTTTTTATAAATATAACACTTCATTTCATGTAGATTAATA 60	Hest Local Similarity 100.0%; Score 856; DB 6; Length 856; Best Local Similarity 100.0%; Pred. No. 7.1e-192; Matches 856; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	100 00 Company of Comp	BASE COUNT 249 a 194 c 150 g 263 t ORIGIN	FEATURES Location/Qualifiers
Оу 7	Db 19	Ωу 66	Db 25	ду 6	Db 3	0у 5	. pb 3	0у 48	Db 4	0у . 4	Db 49	Оу 3	Db 5	. Qy 3	Db 6	Qy 2	Db 6	0у 18	Db 7	. Qy 1:	Db 7	Qy	Db 8	Qy	Match	Query	ORIGIN	BASE CC	FEATURES	JOURNA	REFEREN	SOURCE	ACCESSIC VERSION KEYWORDS	LOCUS

Qy 721 GATCT2	Qy 661 GCCTT Db 196 GCCTT	Qy 601 TAGAAC Db 256 TAGAAC	Qy 541 TATTCTCO Db 316 TATTCTCO	Qy 481 ATCTCATTGC	Oy 421 AACAA: Db 436 AACAA:	Oy 361 CGAGTO	Qy 301 TGACA Db 556 TGACA	Qy 241 CAATTG Db 615 C-ATTG	Qy 181 TAAAA Db 675 TAAAA	Qy 121 TTATTAC Db 735 TTATTAC	Qy 61 TAATTI Db 795 TAATTI	Qy 1 CTCGAG Db 855 CTCGAG	Query Match Best Local Sim Matches 854;	ACCESSION AR14 VERSION AR14 KEYWORDS SOURCE Unknu ORGANISM Unknu Uncli REFERENCE 1 () ROTHORS FLOW TITLE modu. JOURNAL Patel FEATURES SOURCE BASE COUNT ORLIGIN	INITION
PATTAAACGGATCAAGAACGTC	AGATO AGATO	3AAGTTCCTGAGGTCTTCTCCACCAATCTC 	GGAGGTGAGGGTT(GAGGTGAGGGTT(ე — ე	CAATATAAACACGACACGATG CAATATAAACACGACACGATG	GTTGAAGTTCTGGCGCCA 	AATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATC 	GGTTATAAAGGAAGAAGCCATC 	1 G	acacacttatatattgaactactataggcatc 	YTTATCGCATCACACACTATA 	GTTTTTTTTTTTTTTTTTTTTATAAT 	98.4%; milarity 99.8%; Conservative	8906.1 GI:1 8906.1 GI:1 swn. swn. swn. ssified. bases 1 to 8 eal,D. and Ka eal,D. and Ka eal,D. to 8 e	enc
GTCTCCAACAACTCTGCT	CAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAAC 	ACCAATCTCAACTCTTGC 	3CTAGGACTTGGAACATCTGC 	AAAGGTTGTTCCAGTTGTAGCAGGGATATCAGTCAC 	CGATGAATTCCTGCAGTGGGACT 	CACCCTGGTGCATACACTGT	CACGGGAAGGCCGAGATI CACGGGAAGGCCGAGATI	CATCTAAAGTCTTCTTCCTCCGCAGCC 	GTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAG 	CTACTATAGGCATCATC! 	CATCACACACTATATAAGTAAAACACTCTCATTTTCCTC 	TTTATAAATATAACACTTC TTTATAAATATAACACTTC	Score 842.4; DB Pred. No. 1.2e-18 0; Mismatches	96 sky,I.) and genetically lopment 1 01-MAY-2001; lifters lifters nknown" 193 g 248 t	t US 6225530.
TCCAACAACTCTGCTTACTATAAGAGGGTCTCT	AAGTAACCTTTAGAGTGATT AGTAACCTTTAGAGTGATT	AACTCTTGGCTTGTTTTGAACCTGAGAA 	CTGGATCCACCATAACCAAAGT 	CAGTCACCAACCAATGGAG 	AGTGGGACTTGGATTTTCGTAACACAC 	CACTGTTTGCCTGCCAAGCTGTCGA 	TGTAGATCTCAGCAAACTC	ACTCTCCC ACTCTCCC	CTCATCAGAGTATGCAATA 	ATCACCGTTCGTTACTCGTATC	TTTTCCTCCCCCTCTCATTT	TCATTTCATGTAGATTAAT	6; Length 855; 88; 1; Indels 1;	modified plants ha	Illear PAT O
T 780	T 720 T 137	A 660 A 197	A 600 257	A 540 I A 317	A 480 I A 377	A 420 I A 437	G 360 497.	TC 300 TC 557	T 240	A 180 A 676	T 120 T 736	A 60 A 796	Gaps 1;	ving	1002-5001

```
REFERENCE
AUTHORS
                                                  BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
AB027504/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
           Query Match
Best Local Similarity
  Matches 802;
                                                            COUNT
                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                    polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCCACTAGTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                             Araki, T. and Kobayashi, Y.

Direct Submission

Submitted (19-MAY-1999) Takashi Araki, Grad. School of Science.

Kyoto University, Department of Botany, Division of Biological

Sciences; Sakyo-ku, Kyoto, Kyoto 606-8502, Japan

(E-mail: trarqqui@gr.bot.kyoto-u.ac.jp, Tel:81-75-753-4136,

Fax:81-75-753-4141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arabidopsis
AB027504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kobayashi,Y., Kaya,H., Goto,K., Iwab
A pair of related genes with antagon
flowering signals
Science 286 (5446), 1960-1962 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AB027504.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana (strain:Landsberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AB027504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 864)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (sites)
  Conservative
                                                                                                                                                                                                                                                                                   /gene="FT"
70. .597
                                                            671. .675
/gene="FT"
149 c
                                                                                    FYNCQRESGCGGRRL® 671. .675
                                                                                                         /protein_id="BAA77838.1"
/db_xref="GI:4903012"
/db_xref="GI:4903012"
/translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
/translation="MSINIRDPLIVSRVVGDVPSPSNPHLREYLHWLVTDLIPATTGTTFG
PSQVQNKPRVEIGGEDLRNFYTLVMVDDDVPSPSNPHLREYLHWLVTDLIPATTGTTFG
NEIVCZENPSFTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAV
                                                                                                                                                                                            similar to mammalian phophatidylethanolamine protein (PEBP) and hippocampal cholinergic neurostimulating peptide (HCNP) precursor"
                                                                                                                                                                                                                                                                                                                      /note-"Corresponds to nucleotides 10511-10780,
11596-11657, 12371-12411, and 12536-13005 of F5114
(Accession Number AC001229)"
                                                                                                                                                                                                                                                                                                                                                                        /strain="Landsberg er
/db_xref="taxon:3702"
/chromosome="1"
                                                                                                                                                                                                                                     flowering
                                                                                                                                                                                                                                              /standard_name="FLOWERING LOCUS T"
/note="induces flowering; loss-of-
                                                                                                                                                                                                                                                                       /gene="FT"
                                                                                                                                                                                                                                                                                                                                                             /map="90 cM on F5I14"
                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                        'product="FT"
                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                           organism="Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                         . 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       thaliana FT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:4903011
            93.4%;
Score 799.6;
Pred. No. 1.5e
0; Mismatches
                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (FLOWERING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   864
                                                            ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antagonistic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ďď
                                                             246
                                                                                                                                                                                                                                                                                                                                                                                                            thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Iwabuchi, M.
6; DB 8;
1.5e-178;
hes 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                loss-of-function mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     er)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T) mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M. and
roles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Araki,T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mediating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLN
 0;
                                                                                                                                                                                                                       binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-FEB-2000
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77
                                                                                                                                                                                                                                                delays
 0;
                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                              RESULT 4
AY065378/c
LOCUS
 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                γQ
                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                 Š
                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          857
                                                                                                                                                                                                                                   787
                                                                                                                                                                                                                                                           137
                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                   667
                                                                                                                                                                                                                                                                                                                                                           257
                                                                                                                                                                                                                                                                                                                                                                                  607
                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                                                                                   547
                                                                                                                                                                                                                                                                                                                                                                                                                                                             377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67
                                                                                                                                                                                                             77
                                                                                             Arabidopsis thaliana p
FT (At1g65480) mRNA, c
AY065378
AY065378.1 GI:1752918
```

```
CGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAG
                                                                                                                                                                                                                                                                                                                                                                                      TTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTT
                                                                                                                                                                                                                                                         ATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCA
                                                                                                                                                                                                                                                                      ATAAACAGGACAGGAATTCCTGGAGTGGGACTTGGATTTTCGTAACACACAATCTCA
                                                                                                                                                                                                                                                                                                              TTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                ATAGACATCTTTGATCTTGAACAAAC
                     ATAGACATCTTTGATCTTGAACAAAC
                                         TTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTT
                                                                                 TTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTT
                                                                                                                                                                      TTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                           GTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATATCAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    812
52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186
                                                                                  138
                                                                                                                                                                                                                                    546
                                                                                                                                                                                                                                                                               486
                                                                                                                                                                                                                                                                                                                                                                                       558
                                                                                                                                                                                                                                                                                                                                                                                                           306
                                                                                                                                                                                                                                                                                                                                                                                                                                 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               798
                                                                                                       726
                                                                                                                             198
                                                                                                                                                 999
                                                                                                                                                                      258
                                                                                                                                                                                            909
                                                                                                                                                                                                                318
                                                                                                                                                                                                                                                          378
                                                                                                                                                                                                                                                                                                  438
                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                             498
                                                                                                                                                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                     246
```

Arabidopsis thaliana.
Arabidopsis thaliana
Arabidopsis thaliana
Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eu
Rosidae; eurosids II; Brassicales; Brassicaceae; Arab
1 (bases 1 to 840)
Yamada, K., Liu, S.X., Sakano, H., Pham, P.K., Banh, J., C

a; Tracheophyta; eudicots;

Chung, M.K.

FLI_CDNA.

GI:17529185

complete

840

bp mkna e flowering cds.

signals

mediating

PLN 26-APR-2002 protein

AY065378

```
ORIGIN
                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL REFERENCE
                                                                                               Query Match
Best Local Similarity
Matches 767; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
40 TTCATTTCATGTAGATTAATATATATTCGCATCACACACTATATAAAGTAAAACACTCTC 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 (bases 1 to 840)
3 (bases 2 to 840)
4 (bases 2 to 840)
5 (c., Dale, J.M., Dale, J.M., Dale, J.M., Pang, C.C., Goldsmith, A.D., Lee, J.M., Onodera, C.S., Quach, H.L., Tang, C.C., Goldsmith, Wi, H.C., Yamamura, Y., Yu, G., Yu, S., Boyser, L., Carninci, P., Chen, H., Cheuk, R., Hayashizaki, Y., Ishida, J., Jones, T., Kamiya, A., Karlin-Neumann, G., Kawai, J., Kim, C., Lam, B., J., J., Meyers, M.C., Miranda, M., Narusaka, M., Ngyen, M., Palm, C.J., Satou, M., Seki, M., Shino, P., Southwick, A., Shinozaki, K., Davis, R.W., Ecker, J.R. and Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequencing and annotation of the RAFL CDWAS: Yamada, K., Banh, J., Chang, C.H., Chang, E., Dale, J.M., Goldsmith, A.D., Lee, J.M., Chang, C.S., Quach, H.L., Tang, C.C., Toriumi, M., Wu, H.C., Yamamura, Y., Yu, G., Yu, S., Bowser, L., Chen, H., Cheuk, R., Jones, T., Karlin Neumann, G., Kim, C., Lam, B., Lin, J., Meyers, M.C., Miranda, M., Nguyen, M., Palm, C.J., Shinn, P., Southwick, A., Davis, R.W., Ecker, J.R. and Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Street, Albany, CA 94710, USA
RIKEN Genomic Sciences Center (GSC) members carried out the collection and clustering of RAFL CDNAs (RAFL CDNA: 'RIKEN Arabidopsis Full-Length cDNA'): Seki,M., Narusaka,M., Ishida,J., Satou,M., Kamiya,A., Sakurai,T., Carninci,P., Kawai,J., Hayashizaki,Y. and Shinozaki,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamada,K. (SSP/PGEC) and Seki,M. (RIKEN GSC) contributed equally this work. Shinozaki,K. (RIKEN GSC) and Theologis,A. (SSP/PGEC) contributed equally to this work as PIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The Salk, Stanford, PGEC (SSP) Consortium members carried out the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (04-DEC-2001) Plant Gene Expression Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goldsmith, A.D., Lee, J.M., Quach, H.L., Toriumi, M., Yu, G., Bowser, L. Carninci, P., Chen, H., Cheuk, R., Hayashizaki, Y., Ishida, J., Jones, T., Kamiya, A., Karlin-Neuman, G., Kawai, J., Kim, C., Lam, B., Lin, J., Miranda, M., Narusaka, M., Nguyen, M., Palm, C.J., Sakurai, T., Satou, M., Seki, M., Shinn, P., Southwick, A., Shinozaki, K., Davis, R.W., Ecker, J.R. and Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
2 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arabidopsis Full Length cDNA Clones
                                                                                                                                                                                                                                                  276
                                                                                               Conservative
                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                               /gene="At1g65480"
148 c 182
                                                                                                                                                                                                                                                                                                                                                     /translation="mSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
PSOVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG
NEIVCYENPSPTAGIHRVVFILFRQLGRQTVVAPGWRQNFNTREFAEIYNLGLPVAAV
                                                                                                                                                                                                                                                                                                                                     FYNCQRESGCGGRRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="putative flowering signals mediating protein
/protein_id="AAL38819.1"
/db_xref="GI:17529186"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="RAFL06-80-B19 (R11796)"
/note="This clone is in a modified pBluescript vector (Lambda ZAP) as a XhoI/SstI insert.
ecotype: Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          evidence=experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Arabidopsis thaliana"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /chromosome="]
                                                                                                                    89.28;
99.28;
                                                                                               0
                                                                                      Score 763.4; DB 8;
Pred. No. 5.4e-170;
0; Mismatches 6;
                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                               234
                                                                                                                                                                                                                                               ct
                                                                                         Indels
                                                                                                                                                   Length
                                                                                                                                                840;
                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            800 Buchanan
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bowser, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FT.
                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ç
```

Š

JOURNAL MEDLINE REFERENCE AUTHORS TITLE	AUTHORS	ER EN	SOURCE. ORGANIS	ACCESSION VERSION KEYWORDS	FINITI	RESULT 5 AB027505/	Qу 760 ДЬ 117		ОУ 700	Qу 640 Db 237	Db 297	Оу 58	35	52	Qy 46 Db 41	Db 47	0у 40	. 5		Db 59	Оу 28	Db 65	Qy 22	Db 71	Qy 16	Db 77	Оу 10	Db 83
Science 286 (5446), 1960-1962 (1999) 20050958 2 (bases 1 to 780) Araki.T. and Kobayashi,Y. Direct Submission	Kobayashi,Y., Kaya,H., Goto,K., Iwabuchi,M. and Araki,T. A pair of related genes with antagonistic roles in mediating flowering signals	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.	bidopsis thaliana (strain:Landsberg ebidopsis thaliana	AB027505 AB027505.1 GI:4903013 FT.	z		CTTACTATAAGAGGGTCTCTTATATTTATAGACATCTTTGATCTTGAACAAAC 812	AAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTG 1	TAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCCAACAACTCTG 75	GCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTTGGCCA 699		GATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTT 63		CAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCT 57	0 CTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGGGATA 519 	7 GTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATTCCTGCAGTGGGA 418	CAGTGG		TAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGGTGCATACACT ?9	w	CTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGA 33	9	CTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGG		ACCGTTCGTTACTCGTATCATAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAA 21	\vdash	TTTTCCTCCCCCTCTCATTTTTATTACACACTTATATATTGAACTACTATAGGCATCAT 15	7 TTTTTTTTTTTTTGATTAATATAATTATCGCATCACACACTATATAAGTAAAACACTCTC 778

```
밁
                    δõ
                                                     밁
                                                                                Ş
                                                                                                                   В
                                                                                                                                       Ş
                                                                                                                                                                          망
                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                             487
                                                                                                                                                                               480
                                                                                                                                                                                                             307
                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                       247
                                                                                                                                                                                                                                                                                                                                 187
                                                                                                                                                                                                                                                                                                                                                                                               127
                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
nes 725; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                         67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
            TTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTG
                                                                                                                                                                                                                                                      GTTATAAAGGAAGAAGCCATCTAAAGTCTTCCTTCCTCCGCAGCCACTCTCCCCTCTGACAA 306
                                                                                                                                                                                                                                                                                                                  GGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATATCAATTG
                                                                                                                                                                                                                                                                                                                                                                               TTTTTTTTTTTTTTTTTTATAAATATAAACACTTCATTTCATGTAGATTAATAATTA 66
                                                                                     ATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCA 486
                                                                                                                                                                                                                                         GTTATAAAGGAAGAAGCCATCTAAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAA
                                                                                                                                                                                                                                                                                                   GGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATATCAATTG
                                                                                                                                                                                                                                                                                                                                                               TTTTTTTTTTTTTAAAGTATAAATATAACACTTCATTTCATGTAGATTAATAATAA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (19-MAY-1999) Takashi Araki, Grad. School of Sc Kyoto University, Department of Botany, Division of Biolo Sciences; Sakyo-ku, Kyoto, Kyoto 606-8502, Japan (E-mail:taraqui@gr.bot.kyoto-u.ac.jp, Tel:81-75-753-4136, Fax:81-75-753-4141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="BAA77839.1"
/db_xref="GI:4903014"
/db_xref="GI:4903014"
/translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
/translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
/translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
/translation="MSINIRDPLIVSRVC"
WQANSYCTRVAPELQHSRVC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              alternative splice acceptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               first 77 bases of the fourth exon of FT alternative splice acceptor site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Columbi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           detected in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /standard_name="FLOWERING LOCUS T"
/note="amino acid residues 1-101 of hypothetical
translation product are identical to those of FT protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Corresponds to nucleotides 10511-10780,
11596-11657, 12371-12411, and 12536-13005 of F5T14
(Accession Number AC001229)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /strain="Landsberg er
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /gene="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'gene="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Arabidopsis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74.38;
90.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          two ecotypes examined, Landsberg er and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 635.6; DB 8;
Pred. No. 8.7e-140;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                School of Science,
sion of Biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            are lacking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                           366
                                                                                                                                                 426
                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                        374
                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                246
                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                   374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1:
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AY133813/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAGACATCTTTGATCTTGAACAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATAGACATCTTTGATCTTGAACAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCTGAGGTCTTCTCCACCAATCTCAACCTCTTGGCTTTTTGAACCTGAGAAGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGGTCTCTTATATTT 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mediating protein I
AY133813
AY133813.1 GI:2213
FLI_CDNA.
                                                                                                                                                                                                                         2 (bases 1 to 559)
Yamada, K., Chan, M.M., Chang, C.H., Dale, J.M., Deng, J.M., Hsuan, V. Framada, K., Chan, M.M., Chang, C.C., Toriumi, M., Wallender, E.K., Lee, J.M., Quach, H.L., Tang, C.C., Toriumi, M., Wallender, E.K., Wong, C., Wu, H.C., Yu, G., Yuan, S., Bowser, L., Carninci, P., Chen, H. Cheuk, R., Hayashizaki, Y., Ishida, J., Jones, T., Kamiya, A., Karlin-Neumann, G., Kawai, J., Kaha, J., Jones, T. Lin, J., Miranda, M., Narusaka, M., Nguyen, M., Palm, C.J., Sakurai, T., Satou, M., Seki, M., Narusaka, M., Nguyen, M., Palm, C.J., Sakurai, T., Satou, M., Seki, M., Shinn, P., Southwick, A., Shinozaki, K., Davis, R.W., Ecker, J.R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                   l (bases 1 to 559)

Yamada, K., Chan, M.M., Chang, C.H., Dale, J.M., Deng, J.M., Hsuan, V.W., Lee, J.M., Quach, H.L., Tang, C., Toriumi, M., Wallender, E.K., Wong, C., Wu, H.C., Yu, G., Yuan, S., Bowser, L., Carninci, P., Chen, H., Cheuk, R., Hayashizaki, Y., Ishida, J., Jones, T., Kamiya, A., Karlin-Neumann, G., Kawai, J., Kim, C., Lam, B., Lin, J., Miranda, M., Narusaka, M., Nguyen, M., Palm, C.J., Sakurai, T., Satou, M., Seki, M., Shino, P., Southwick, A., Shinozaki, K., Davis, R.W., Ecker, J.R. and Theologis, A. Arabidopsis Open Reading Frame (ORF) Clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AY133813

Arabidopsis thaliana clone U11796 putative flower mediating protein FT (Atlg65480) mRNA, complete
Street, Albany, CA 94710, USA
The RIKEN Genomic Sciences Center (GSC) members carried out the collection and clustering of RAFL CDNAs (RAFL CDNA: 'RIKEN Arabidopsis Full-Length cDNA'): Seki,M., Narusaka,M., Ishida, Satou,M., Kamiya,A., Sakurai,T., Carninci,P., Kawai, J., Hayashizaki,Y. and Shinozaki,K.
                                                                                                                                                      Direct Submission Submitted (17-JUL-2002) Plant Gene Expression Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arabidopsis thaliana.
                                                                                                                                                                                                          Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:22136805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear P
                                                                                                                                                                                                                                                                                                                              Carninci, P., Chen, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            signals
                                                                                                                                                      800 Buchanan
                                                                                                                                                                                                                                                                                                                                                                             Hsuan, V.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-AUG-2002
                                                   Ishida, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     198
```

The Salk, Stanford, PGEC (SSP) Consortium members constructed and sequenced the pUNI (ORF) clones using the RAFL CDNAS: Yamada, K., Chang, C.H., Dale, J.M., Deng, J.M., Hsuan, V.W., Lee, J.M. Quach, H.L., Tang, C.C., Toriumi, M., Wallender, E.K., Wong, C., Wu, H.C., Yu, G., Yuan, S., Bowser, L., Chen, H., Cheuk, R., Jones, T., Kariin-Neumann, G., Kim, C., Lam, B., Lin, J., Miranda, M., Nguyen, M., Palm, C.J., Shinn, P., Southwick, A., Davis, R.W., Ecker, J.R. and

Yamada,K.

(SSP/PGEC)

and

Seki,

3

(RIKEN GSC)

contributed equally

```
BASE COUNT
ORIGIN
          밁
                       Ş
                                           Ъ
                                                             Q
                                                                                   g
                                                                                                Q
                                                                                                                     문
                                                                                                                                      δÃ
                                                                                                                                                             В
                                                                                                                                                                           Ş
                                                                                                                                                                                                  밁
                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 559; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                         3'UTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                           596
                                                                                                                                                                                                  319
                                                                                                                                                                                                                                                         416
                                                                                                                                                                                                                                                                                                                                                  776
                                                                  716
                                                                                    139
                                                                                                       656
                                                                                                                          199
                                                                                                                                                               259
                                                                                                                                                                                 536
                                                                                                                                                                                                                     476
                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                           439
                                                                                                                                                                                                                                                                                              356
                                                                                                                                                                                                                                                                                                                499
                                                                                                                                                                                                                                                                                                                                  296
                                                79
          19
                                                                                                                                                                                                                                                                                                             CCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAA
                   CTCTTATATTTATAGACAT
                                                                                           GAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTTGGCCATAAGTAACCTTTAGAG
                                                                                                                       AAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCT 655
                                                                                                                                                           GTCGAAACAATATAAACACGACACGATGAATTTCCTGCAGTGGGACTTTGGATTTTCGTAAC
                                                                                                                                                                                                                                                                        CTCTTATATTATAGACAT
                                                        TGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGT
                                                                                   GAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAG
                                                                                                                                                                                                                                     GTCGAAACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAAC
                                              TGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to thi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            this
                                                                                                                                                                                                                                                                                                                                                                                                                                      151
                                                                                                                                                                                                                                                                                                                                                                                       65.3%; Score 559; DB 8; Larity 100.0%; Pred. No. 1.1e-121; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        s work. Shinozaki,K. (RIKEN GSC) and Theologis,A. (SSP
contributed equally to this work as PIs.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=experimental /product="putative flowering signals mediating protein FT" /protein_id="AaM91747.1" /protein_id="AaM91747.1" /db_xref="Gi:21316806" / translation="MSINIRDPLIVSRVVGDVLDFENRSITLKVTYGQREVTNGLDLR PSQVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG NEIVCYENPSPTAGIHRVVFILFRQLGROTVYAPGWRQNFNTREFAEIYNLGLPVAAV FYNCQRESGCGGRL" 559
                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="At1g65480"
117 c 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ecotype: Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Arabidopsis
/db_xref="taxon:3702"
/chromosome="1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="At1g65480"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"This clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="U11796"
                             794
                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                      159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     thaliana'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IND
                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51.
                                                                                                                                                                                                                                                                                                                                                                                                        Length 559;
                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                775
                                                                                                                                                                                                                                                                                             415
                                                                                                                                                                                                260
                                                                                                                                                                                                                                                        475
                                                                                                                                                                                                                                                                                                               440
                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                   500
                                              20
                                                                                   80
                                                                                                                                                                               595
                                                                                                                                                                                                                                                                                                                                                                     295
                                                                                                                                                             200
                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                          380
                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
DEFINITION
ACCESSION
밁
                Š
                                    밁
                                                    QΥ
                                                                        밁
                                                                                         δÃ
                                                                                                             밁
                                                                                                                               δÃ
                                                                                                                                                   밁
                                                                                                                                                                 Qγ
                                                                                                                                                                                       밁
                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
E38985/c
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                    Query Match
Best Local Sin
Matches 528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                              source
                                                       627
                                                                                                                                 507
108
                  687
                                     168
                                                                         228
                                                                                            567
                                                                                                               288
                                                                                                                                                   348
                                                                                                                                                                     447
                                                                                                                                                                                        408
                                                                                                                                                                                                          387
                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                              327
                                                                                                                                                                                                                                                                528
                                                                                                                                                                                                                                                                                   267
CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Method
E38985
E38985.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E38985
                                                                                                                                                                                                                                                                                                                                                  143
                                                                                                                                                                                                                                                                                                                                                  ρ
```

```
Araki,T., Kobayashi,K., Ogawa,K. and Shirai,M.
Method for shortening plant generation and plant
Patent: JP 2000139250-A 1 23-MAY-2000;
TORAY IND INC
OS Arabidopsis
PN JP 2000139250-A/1
PD 23-MAY-2000
PF 11-NOV-1998 JP 1998320219
PR TAKASHI ARAKI,KYOJI KOBAYASHI,KENICHI OGAWA,MAKOTO SHIRAI PC 401H1/00,A01H5/00,C12N5/10,C12N15/09/(C12N5/10,C12R1:91), PC (C12N15/09,C12R1:91), C12N5/00,C12R1:91), PC (C12N15/09,C12R1:91)
CC
FH Key Location/Qualifiers
FT source /organism-'Arabidopsis'.
                                                     CTAAAGTCTTCCTTCCCCCCGCAGCCACTCTCCCCTCTGACAATTGTAGAAAACTGCGGCCAC
CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                       ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC
                                                                                                                                                                                                               TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTTGAGGGTTGCTAGG
                                                                                                                                                                                                                                 TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGG
                                                                                                                                                                                                                                                                                                                                                                  GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTAAAGTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCAC
                                                                                                                                   ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC
                                                                                                                                                                                                                                                                                                                                                                                                      TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAAT 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP 2000139250-A/1.
Arabidopsis.
Arabidopsis
Arabidopsis
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Trachec
Eukaryota; Varidiplantae; Streptophyta; Embryophyta; Trachec
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Spermatophyta; Magnoliophyta; Ensistates; Brassicales.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 528)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61.7%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for shortening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism=',
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Arabidopsis"
/db_xref="taxon:3701"
111 c 129 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:18625004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 528; DB 6; Le Pred. No. 2.4e-114; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 bp DNA
generation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
plant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                            506
                                                                                             686
                                                                                                                                   169
                                                                                                                                                                         626
                                                                                                                                                                                                               229
                                                                                                                                                                                                                                                   566
                                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                                                                                                                                                  349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      469
                                                       109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

gene

```
JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
F5I14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                Sg
                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTATAGACAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (11-JUN-1997)
On Jun 10, 1997 this sequence version replaced gi:1943864.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (06-JUN-1997) Plant Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shen,Y.K., Buehler,E., Conway,A.B., Conway,A.R., Dewar,K., Feng,J.K., Kim,C., Kurtz,D., Li,Y., Shinn,P., Sun,H., Davis,R.W., Ecker,J.R. Federspiel,N.A. and Theologis,A.
The sequence of BAC F5114 from Arabidopsis thaliana chromosome 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vysotskaia, V.S., Osborne, B.I., Toriumi, M., Yu, G., Oji, O.,
Shen, Y.K., Buehler, E., Conway, A.B., Conway, A.R., Dewar, K., Feng, J.
Kim, C., Kurtz, D., Li, Y., Shinn, P., Sun, H., Davis, R.W., Ecker, J.R.,
Rid, C., Kurtz, D., Li, Y., Shinn, P., Sun, H., Davis, R.W., Ecker, J.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (15-APR-1997) Plant Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana. Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Theologis, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Street, Albany, CA 94710,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (17-APR-1997) Plant Gene Expression Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Theologis, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC001229.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 109560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Albany, CA 94710, USA es 1 to 109560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of BAC F5I14 from Arabidopsis thaliana chromosome 1,
                                                                                                                                                                                                                        /translation="mrrQPKSELFPKLKLSTNSGVTSDGEPNMEKQGDGCEENNFDGR
QCKPSSSNRKKSRRVKQLLQFDKSCRPGFYGIWPSQSTCFLNLTKDHWVIKILLYRKK
LVKAFQIVRKMKTKVWKKDVQRLMMKMIVKMTLWCLMDISQKMR"
                                                                                                                                                                                                                                                                                                                                                                    complement(join(129. .327,950. .1191))
/gene="F5114.1"
{f SSLNLEMKGLFDYFREVMDKSKRTDLFSGFSECSSLNSMVALLMEEMSLPLSKLVDEI}
                                    /evidence=not_experimental
/protein_id="AAB60903.1"
/db_xref="GI:2190539"
                                                                                                                                         complement(join(1312. .1701,1833. 2268. .2367,2491. .2949))
                                                                                                                                                                               complement(1312. .2949)
/gene="r5114.2"
                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/protein_id="AAB60919.1"
/db_xref="GI:2190555"
                                                                                                                                                                                                                                                                                                                                                                                                             complement(129. .1191)
/gene="F5I14.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:3702"
/chromosome="1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Arabidopsis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 to 109560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cultivar="Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 to 109560)
                                                                                                    codon_start=1/
                                                                                                                                                                                                                                                                                                                                                     codon_start=1
                 translation="MDEVSTVNENENRKTMIEPKKLNKRKREPTAIENLTSEEKESQI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to 109560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .109560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109560 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plant Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Expression Center, 800 Buchanan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Expression Center,
                                                                                                                                                              .1956,2039.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLN 11-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               800 Buchanan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               800 Buchanan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Feng, J.,
```

gene

gene CDS

```
complement(join(41498.
41981. .42127,42220. .4
/gene="F5I14.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="MCSLEKRDRLFILKLTGDGEHRLNPTLLDSLRSTINQIRSDPSF
SQSVLLTTSDGKFFSNGYDLALAESNBSLSVYMDAKLKSIVADLISLPMPTLAAVTGH
ASAAGCILAMSHDYVLMRRDRGFLYMSELDIELIVPAMFMAVIRGKIGSPAARRDVML
TAAKVTADVGYKMGIVDSAYGSAAETVEAAIKLGEEIVQRGGDGHVYGKMRESLLREV
LIHTIGEYESGSSVYRSTGSKL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /translation="MAGKLKPEEAVQATLSSLPDEVVDTVGEEEEEEEEEMAKMKESA
SSQKDVALDEMMASTAKDANEQAKAKTLEKHEQLCELSRALAVLASASVWRLLTTLSF
ILPIGVLRSVSMEREEFLKLVKKEVDLYNSMVEKGGTDDEEDARKAYLAAREDSDRSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(40241.
/gene="F5I14:5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MGMKSPNIAAFMLPLLLILFTLSSQLKVVESTGRKLAWGFSGTPIVTTPPSRSCGTSPAVFTSKWRRPRPCRLPPGSYIPASDQSP"complement(40241. .40963)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VDIRSFMDNMMQKNSSEMAEKDSKREEKLLLKQLEKNRCEAEKEKKRMERQVLKEKLQ
QEKEQKLLQKAIVDENNKEKEETESRKRIKKQQDESEKEQKRREKEQAELKKQLQVQK
QASIMERFLKKSKDSSLTQPKLPSSEVTAQELSCTKHENEIGKVVQAIDNAFSTTCEA
/translation="MEGFYRSRLLQSPSFSNGVGILELPYPLGYRLVFQSMYSSLATA
NKPDHBKKGEKYTSQTKEASPEECDEAVEGLSLAKAKAKAKLESQKSDISINGRVR
LFLLGIGPALRAIASMSFEEDWAKKLEHWKDEFKSTLGHYWLGTKLLWADVRTISVRLLV
KLANGKGLSRRERQQLTRTTADIFRLVPVAVFIIVPFMEFLLPVFLKLFPNMLPSTFQ
                                                                                                                                                                                                                          /note="Similar to Saccharomyces hypothetical protein
P9642.2 (gb|U40828)."
                                                                                                                                                                                                                                                                                                                                         complement(join(42975.
                                                                                                                                                                                                                                                                                                                                                                                                 complement (429
                                                                                                                                                                                                                                                                                                                                                                                                                                                       {\tt QKAIADKTSSALLDRVETMLQKLEKEIDDVDNKIGNRWRLLDRSVDYDGKVSPDEVAL}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(41498. .42875)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/protein_id="AAB60906.1"
/db_xref="GI:2190542"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FYNCQRESGCGGRRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEIVCYENPSPTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
PSQVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/protein_id="AAB60904.1"
/db_xref="GI:2190540"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         join(10580. .10780,11596. .11657,12371.
/gene="F5114.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TVDDIRRYDIGSPC'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YLKLKEKTESYTMVAVKSAVVSVGQRVSYGVLNVDADVLEDDSESCLWCWETRDLKIM
PSSVRGVLKLRRTCRKKIHERITAVSAMLAALQREETEKLWRSDLSKAAEKLGKILSE
                                                                                                          /evidence=not_experimental
/protein_id="AAB60908.1"
/db_xref="GI:2190544"
                                                                                                                                                                                                                                                                                                                                                                                                                      AAMYLKDTLGKEGIQELIQNLSKDKVFVVFRWQNTGGRLSEVSERD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/protein_id="AAB60907.1"
/db_xref="GI:2190543"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="F5I14.6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="F5I14.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="AAB60905.1"
/db_xref="GI:2190541"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  join(36957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="F5I14.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Similar to Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="F5I14.3"
                                                                                                                                                                                                                                                                               /gene="F5I14.7"
                                                                                                                                                                                                                                                                                                                                                                 /gene="F5I14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="EST gb|N37484 comes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="F5I14.4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .37065
                                                                                                                                                                                                                                                                                                            ,43856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .40963)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37294.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3. .41562,41619.
.42267,42316. .4
                                                                                                                                                                                                                                                                                                            3. .43043,43213.
.44002,44168. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .37445)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TFL1
                                                                                                                                                                                                                                                                                                            3. .43339,43501. .43593,
.44480,44564. .44922))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9. .41734,41808. .41896
.42564,42795. .42875))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (gb|U77674)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .12411,12536. .12759;
```

gene

CDS

gene

CDS

```
Query Match
Best Local
        12940
                                                                                                            13000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                         86
                                                                                                                                                                26
                                                                                                                                  TATAAATATAACACTTCATTTCATGTAGATTAATAATTATCGCATCACACACTATATA 12941
                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIEGFGLARVIDSDDTNYKPGDIVSGIIGWEEYSLLRSSDNLQLRNIQLDDDIPLSYH

IGLLCWAGFTAYAGFNEICCFKKGDSVEVSAACGAVGQLVGQLAKLHGCYVVGSAGSK

QKVEILKNELGYDEARNYKEEADLDTALKRYFPGGIDIYFDNVGGSMLDAALLNMKVF

GRIALCGMVSLQSLSTSSQGIKNLYSALYKRLBLEGFLQSDYLHIFPQFLENVKRYYK

GRIALCGMVSLQSLSTSSQGIKNLYSALYKRLBLEGFLQSDYLHIFPQFLENVKRYYK

EGKIYYVEDISEGLDLAPAALVGLFSGKNIGKQVVRVAKE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/protein_id="AAB60917.1"
/protein_id="AAB60917.1"
/db_xref="GI:2190553"
/translation="MCEVSYVENKKVILKNYVDGIPTETDMEVKLGETIELKAPKGSS
CFLVKNLYLSCDPYMRGRMRDFHGSYLPPFVPGQKCCEVLRFVLFIGELFIFEEREMC
RCCIYALERSCTPSFROFDEWIYYMLRKLEICYILLVKLFIFFNDSLISTDSFVILMQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCFÖVLICILGVWRNIVRFLSPLSIAPLATFTGLGLYHIĞFPLIYNMMQTSFIFOLAR
CVEVGLPGLILLIFVTQYLPRIKMKKOYMILDGSCORYĞMLICI PLYWLFAQLLTS
SGYLDHKSHTTQTSCRIPTGTTGLITNTPWIYILPYPFQMCSPTFDITDSFRAMAASFYLL
FESTGLFYASARYĞSATPIPPSVVSRGTCWLĞVGVLLNGMLĞĞITĞITTSTENVĞLLA
MTKIĞSRRVIQISAAFWIFFSIFĞKFĞAFFASIPLFYMASLYCLVLÇFYCKSFSSHHI
CSIAPSINICPIFFTKIKSNSIYNAAŞVĞLSYLQFCNLNSFNIKFILĞFSFFMAISIP
QYFREYYNGĞWRSDHHSNWYSTSYSIL"
                                                                                                                                                                                                                                                                                                                                              NVKIKGVLSLNSQLFHIAINRCRNIKIEDVRIIAPDESPNTDGIHIQLSTDIEVRNAS
IKTGDDCISIGPGTKNLMVDGITCGPGHGISIGSLAKSIEEQGVENVTVKNAVFVRTD
NGLRIKSWPRHSNGFVERVRFLGAIMVNVSYPILIDQNYCPGDSSCPSQESGIKINDV
                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MALFLSFVQVFSIVITIIMSHFGQFDARTSLNVLSFGANPNGIV
ESAKAFSDAWDAACGVEDSVVIYVPKGRYLVSGEVRFEGESCKSREITLRIDGTLIGP
QDYSLLGKKENWFSF5GVHNVTVLGGSFDAKGSTLWSCKANGYNCFEGATTLRENDSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="F5I14.10"
/protein_id="AAB60920.1"
/db_xref="GI:2190556"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Strong similarity to precursor (gb|U23053)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(join(53168. .53386,53596. .54114,54461. .54916))
/gene="F5114.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(53168. .54916)
/gene="F5I14.10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Strong similarity to Arabidopsis zeta-crystallin-like protein (gb|Z49268)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(join(50678. .51059,51406. .51488,51567. 51818. .52033,52078. .52294,52510. .52743))
/gene="F5114.9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(50678. .52743)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="mtnggggnngaanrteelqphpvkeqtpgtqycvnspppwleav
VLGFQHYLLSLGITVLIPSMLETFFFFFFFFFLNRESILIFYAEKVKVIQTLLFVSGLT
TLFQSFFGTRLPVIAVASYAVIIPITSIIYSTRFTXYTDPFEREVRTMRSIQGALIIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(join(47061 ...47422,47541 ...47632,47766 ...47824,47929 ...48015,48122 ...48218,48320 ...48525,48704 ...48799,48184 ...48959,49053 ...49153,49242 ...49418,49467 ...49532,49587 ....49587 ...49570))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVGVSNDEILGFAKLFNDELTLDNINRSRLVNMCKYMGISPFGTDAYLRYMLRKRLQE
IKKDDKLIKAEGVESLSEAELRQACRERGMLQLGSVEEMREQLVDWLDLSLNHSVPSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(47061. .49870)
                                                                                                                                                                                                                                                                                                                   IYSGIMGTSATEIAIKMDCSEKVPCTGIRMQAINLTSYGEAAKTSCTNVSGKQLGLVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="F5I14.9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
/protein_id="AAB60909.1"
/db_xref="GI:2190545"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="Similar to Zea mays permease 1 (gb|U43034)."
                                                                                                                                                                                                                                       54.48;
                                                                                                                                                                                                                                       Score 466; DB 8; L; Pred. No. 8.3e-100;
                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Solanum polygalacturonase
                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                               Length 109560;
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                           0;
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .51733,
                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF152096/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12640
                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                       gene
                                                                                                                     CDS
                                                                                                                                                           5'UTR
                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCC 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACGACACGATGAA 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTAAAGTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAAACTGCGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCCTCTGACAATTGTAGAAAACTGCGGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATAGATGCATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCA 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTATAGGCATCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTATAGGCATCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATAC
                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (17-MAY-1999) Plant Biology Laboratory, The Salk Institute for Biological Studies, 10010 N. Torrey Pines Road, Jolla, CA 92037, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kardailsky,I., Shukla,V.K., Ann,J.n., way Christensen,S.K., Nguyen,J.T., Chory,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis thaliana. Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 2483)
Kardailsky, I. and Weigel, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Activation tagging of the floral inducer FT Science 286 (5446), 1962-1965 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana flowering locus T (FT) gene, {\tt AF152096}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF152096.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AF152096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Weigel,D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .0583961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 2483)
/note="similar to hippocampal cholinergic neurostimulating peptide (HCNP) precursor, phosphatidylethanolamine binding protein (PEBP) and Raf kinase inhibitor protein; corresponds to Arabidopsis thaliana BAC F5II4 sequence
                                                                                     /gene="FT"
                                                                                                                                     /gene="FT"
                                                                                                                                                                                             /gene="FT"
                                                                                                                                                                                                                                                                         /map="90 cM;
                                                                                                                                                                                                                                                                                                 /db_xref="taxon:3702"
/chromosome="I"
                                                                                                                                                                                                                                                                                                                                   /organism="Arabidopsis/cultivar="Columbia"
                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                           /product="flowering
                                                                                                                                                                                                                                     ′gene="FT"
                                                                                                                                                                                                                                                                                             /chromosome=
                                                                             'function="induces flowering"
                                                                                                                                                                                                                 oin(1. .264,1080. .1141,1855.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:6117977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shukla, V.K., Ahn, J.H., Dagenais,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2483 bp
                                                                                                                 .1141,1855.
                                                                                                                                                                             locus
                                                                                                                                                                                                                                                                                                                                                     thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                   .1895,2020. .2483)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Harrison, M.J.
                                                                                                                   .1895,2020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLN 22-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            205
                                                                                                                                                                                                                                                                                                                                                                                                                                 Гa
```

```
REFERENCE
AUTHORS
TITLE
                                             MEDLINE
REFERENCE
                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                         DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                   RESULT 10
AB027506/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                AUTHORS
                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                              2063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polyA_site
                                                                                                                                                                                                                                                                                                                                                                                          447
                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCTGCAGTGGGACTTGGATTTTCGTAACACACAAATCTCATTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTATAGGCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATAAATATAACACTTCATTTCATGTAGATTAATAATTATCGCATCACACACTATATAA 2424
                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGGCACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATAGATGCATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTAAAACACTCTCATTTTCCTCCCCCTCTCATTTTATTACACACTTATATATTGAACTA
                                                                                                                                                                                                                                                                                                                                                             TCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                      TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATAGATGCATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTATAGGCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAAATTAAAATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                465;
               Araki,T. and Kobayashi,Y. Direct Submission
                                                                                                                                                                                              Arabidopsis thaliana (strain:Columbia) cDNA to Arabidopsis thaliana
                                                                                                                                                                                                                           AB027506.1
TSF.
                                                                                                                                                                                                                                                         Arabidopsis thaliana TSF AB027506
   Submitted
                                                                          flowering si
Science 286
                                                                                                                                                             Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                      Kobayashi,Y., Kaya,H., Goto,K., Iwabuchi,M.
                                                                                                                                                    Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                        pair of related genes with antagonistic
lowering signals
                                             (bases 1 to 799)
                                                                                                                                      (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                    eurosids II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="FT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLR
PSQVQNKPRVEIGGEDLRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFG
NEIVCYENPSPTAGIHRVVFILFRQLGRQTVYAPGWRQNFNTREFAEIINLGLPVAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FYNCQRESGCGGRRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="flowering locu
/protein_id="AAF03936.1"
/db_xref="GI:6117978"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         presented in GenBank Accession
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
(19-MAY-1999) Takashi Araki,
                                                                         (5446),
                                                                                                                                                                                                                                           GI:4903015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                          1960-1962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 465;
Pred. No.
                                                                                                                                                Brassicales; Brassicaceae; Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     407
                                                                                                                                                                                                                                                                     799 bp mRNA linear (TWIN SISTER OF FT) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         locus T"
                                                                          (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; DB 8;
. 1.7e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       t
 Grad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Number AC001229"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 2483;
                                                                                                        roles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                             2019
                                                                                                                                                                                                                                                                                                                                                                                         491
 School of Science
                                                                                                                                                                                                            mRNA.
                                                                                                      in
                                                                                                                    Araki, T.
                                                                                                                                                                                                                                                                       complete cds
                                                                                                      mediating
                                                                                                                                                                                                                                                                                     PLN 26-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2364
                                                                                                                                                                                                                                                                                                                                                                                                                                                    446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

Q 망 QΥ 밁 Qy 망 Ş 밁 δÃ 망

밁

VERSION

TITLE

. δ

밁 Q В Qγ

Best

```
멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
   밁
                            δÃ
                                                              멍
                                                                                        Ş
                                                                                                                         B
                                                                                                                                                   δõ
                                                                                                                                                                                     밁
                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                  皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                   616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
   196
                                630
                                                                                                                           316
                                                                                                                                                        510
                                                                                                                                                                                        376
                                                                                                                                                                                                                   450
                                                                                                                                                                                                                                                  436
                                                                                                                                                                                                                                                                                390
                                                                                                                                                                                                                                                                                                              496
                                                                                                                                                                                                                                                                                                                                           330
                                                                                                                                                                                                                                                                                                                                                                        556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               676
                                                                256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          157 CATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATA---CTATAGATG 213
TGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAAGGTTGTTCCAGTTGT
                                                                                                                                                                                                                                                                                                                                                                     AGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACT. 569
                                                                                                                                                                                                                                                                             TGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATTCC
                                                                                                                                                                                                                                                                                                                           AAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAG----CCATCTA
                                                            TGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAAT
                                                                                                                         GGCAGGTATATCAGTCACCAACCAGTGGAGATATTCTCGTTGGTGAGGGTTGCTTGGACT
                                                                                                                                                                                      CGAGGGGGGACGTGGACTCTCGTAGCACCACCTCATTGCCAAAGGCATTTCCAGTGGT
                                                                                                                                                                                                                                                  TGCATAAACCGTTTGTCTTCCGAGTTGCCGGAACAATACCAACACAATACGATGAATTCC
                                                                                                                                                                                                                                                                                                           AAGACCAAGATTGTAGATCTCAGCAAACTCACGAGTGTTGAACTGTTGGCGCCACCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                   AAGTCTTCTTCCTCCGCAGCCACTCTCCCCTCTGACAATTGTAGAAAACTGCGGCCACGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCATTAAGGGAATATTATACGATTAGATTATTAGTTAACGTAAGTAGGTACGCATCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATCATTTTTTTTAGCTCGTATCTTTAAATTCTTATTACATTGACATAGATGCTTAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax:81-75-753-4141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kyoto University, Department of Botany, Division of Biological
Sciences; Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
(E-mail:taraqui@gr.bot.kyoto-u.ac.jp, Tel:81-75-753-4136,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  772. .777
/gene="TSF"
a 152 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="TSF"
/product="TSF"
/protein_id="BaA77840.1"
/protein_id="BaA77840.1"
/db_xref="GI:4903016"
/translation="MSLSRRDPLVVGSVVGDVLDPFTRLVSLKVTYGHREVTNGLDLR
PSQVLMKPIVEIGGDDFRNFYTLVMVDPDVPSPSNPHQREYLHWLVTDIPATTGNAFG
NEVVCCYESPRPSGIHRIVLVLFRQLGRQTVYAPGWRQQFNTREFAEIYNLGLFVAAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="extensive homology with FT similar to mammalian phophatidylethanolamine protein (PEBP) and hippocampal cholinergic neurostimulating peptide (HCNP) precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YFNCQRENGCGGRRT"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /standard_name="TWIN SISTER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:3702"
/chromosome="4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Arabidopsis
/strain="Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /map="next to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45.5%;
76.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 389.8; DB 8 Pred. No. 1.1e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LSD1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches 147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 locus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         799;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
   137
                                689
                                                              197
                                                                                           629
                                                                                                                                                                                     317
                                                                                                                                                                                                                   509
                                                                                                                                                                                                                                                  377
                                                                                                                                                                                                                                                                             449
                                                                                                                                                                                                                                                                                                           437
                                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                       497
                                                                                                                                                                                                                                                                                                                                                                                                     329
                                                                                                                                                                                                                                                                                                                                                                                                                                   557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               617
                                                                                                                         257
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
ACCESSION
                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
AF152907/c
 밁
                                                      밁
                                                                              δÃ
                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                               Query Match
Best Local S
Matches 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
  468
                             327
                                                         528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76
                                                     CTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGGCCAC 326
              GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC
 AGGAAGACCAAGATTGTAGATCTCAGCAAACTCACGAGTGTTGAACTGTTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    434;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.

1 (bases 1 to 528)

Kardailsky,I., Shukla,V.K., Ahn,J.H., Dagenais,N., Christensen,S.K., Nguyen,J.T., Chory,J., Harrison,M.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (19-MAY-1999) Plant Biology Laboratory, The Sa
Institute for Biological Studies, 10010 N. Torrey Pines
Jolla, CA 92037, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Activation tagging of the floral inducer Science 286 (5446), 1962-1965 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thaliana
AF152907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 (bases 1 to 528)
Haaksma,S., Shukla,V.K., Ahn,J.H. and Weigel,D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Weigel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF152907.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF152907
                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        058396
                                                                                                                                                                                       123
                                                                                                             44.1%;
nilarity 82.2%;
Conservative
                                                                                                                                                                                   NEVVCYESPRPPSGIHRIVLVLFRQLGRQTVYAPGWRQQFNTREFAEIYNLGLPVAAS
YFNCQRENGCGGRRT"
116 c 142 g 147 t
                                                                                                                                                                                                                                                                                                                 /note-"flowering locus T (FT) homolog; similar to hippocampal cholinergic neurostimulating peptide oprecursor, phosphatidylethanolamine binding proteind Raf kinase inhibitor protein"
                                                                                                                                                                                                                               /translation="MSLSRRDPLVVGSVVGDVLDPFTRLVSLKVTYGHREVTNGLDLR
PSQVLNKPIVEIGGDDFRNFYTLVMVDPDVPSPSNPHQREYLHWLVTDIPATTGNAFG
                                                                                                                                                                                                                                                          /product="twin sister of
/protein_id="AAF03937.1"
/db_xref="GI:6117980"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Arabidopsis/cultivar="Columbia"
                                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                           /gene="TSF"
                                                                                                                                                                                                                                                                                                                                                                                                      'gene-"TSF"
                                                                                                                                                                                                                                                                                                                                                                                                                                   /map="between
                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:3702"
/chromosome="IV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:6117979
                                                                                                               0;
                                                                                                             Score 377.6;
Pred. No. 8.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    twin
                                                                                                                                                                                                                                                                                                                                                                                                                                  g3883 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  528 bp
n sister
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of
                                                                                                                                                                                                                                                                                                                                                                                                                                  g13838"
                                                                                                             .3e-79;
ies 94;
                                                                                                                                                                                                                                                                                        ΞŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
f FT
                                                                                                                                         DB 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A linear (TSF) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŦΤ
                                                                                                                                        Length
                                                                                                               Indels
                                                                                                                                           528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLN
                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Salk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Road,
                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                               (HCNP)
409
                            386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                (PEBP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 La
                                                                                                               0
```

```
ACCESSION
VERSION
          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
E38986/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                               ORIGIN
                                                                                                           BASE COUNT
                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                        Matches 432;
                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                     source
                                                                                                                                                                           PI TAKASHI ARAKI,KYOJI KOBAYASHI,KENICHI OGAWA,MAKOTO SHIRAI A01H1/00,A01H5/00,C12N5/10,C12N15/09/(C12N5/10,C12R1:91), PC (C12N15/00,C12R1:91),C12N5/00,C12N15/00,(C12N5/00,C12R1:91), PC (C12N15/00,C12R1:91)
CC FH Key Location/Qual:f:
FT source
             267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   387
                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48
CTAAAGTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCAC 326
                                                                                                                                                                                                                                                                            Method for shortening plant generation and pleatent: JP 2000139250-A 2 23-MAY-2000;
Patent: JP 2000139250-A 2 23-MAY-2000;
OS Arabidopsis
PN JP 2000139250-A/2
PD 23-MAY-2000
PF 11-NOV-1998 JP 1998320219
PR TAKASHI ARAKI, KYOJI KOBAYASHI, KENICHI OG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTATAGACAT 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATCTCAACTCTTGGCTTGTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGGCAGGTATATCAGTCACCAACCAGTGGAGATATTCTCGTTGGTGAGGGTTGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTCTATGGCCATAAGTGACCTTAAGAGAGACCAACCTCGTGAAAGGATCAAGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATCTCCACTATTGGTTTGTTCAGAACTTGAGAAGGCCTTAGATCCAAGCCATTAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTCGGCACATCTGGATCCACCATAACCAAGGTGTAGAAATTTCTGAAGTCGTCCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGTGCATAAACCGTTTGTCTTCCGAGTTGCCGGAACAATACCAACACAATACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAACAACACTGCCGACCACAAGAGGATCTCTACGACTTAAAGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E38986.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E38986
Method
                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 528)
Araki,T., Kobayashi,K., Ogawa,K. and Shirai,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP 2000139250-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arabidopsis.
                                                    Similarity
                                                                                                            122
                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for shortening
                                                                                                            g
                                                                                                                                                                 /organism='
                                                                                                        /organism="Arabidopsis"
/db_xref="taxon:3701"
117 c 142 g 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:18625005
                                                    43.7%;
                                        0;
                                       Score 374.4; DB 6;
Pred. No. 4.7e-78;
0; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              528 bp DNA plant generation
                                                                                                            147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
plant.
                                                                                                                                                                                                                                                                                                                                                                                            plant
                                        Indels
                                                                  Length
                                                                    528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT
                                        0;
                                                                                                                                                                                                                                                                               SHIRAI PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-JAN-2002
                                       Gaps
                                                                                                                                                                                                                                                                   BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         349
                                                                                                                                                                                                                                                      g
                                        0,
```

밁

528

CTACGTTCTTCCCCCCACAGCCATTCTCCCCTCTGGCAGTTGAAGTAAGAGGCAGCCAC

```
JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
AB027456/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FOCUS
                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                              AUTHORS
                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTATAGACAT 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGGCAGGTATATCAGTCACCAACCAGTGGAGATATTCTCGTTGGTGAGGGTTGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAAACACGACAACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCCGAGGGGGGACGTGGACTCTCGTAGCACCACCTCATTGCCAAAGGCATTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGTGCATAAACCGTTTGTCTTCCGAGTTGCCGGAACAATACCAACACAATACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGAAGACCAAGATTGTAGATCTCAGCAAACTCACGAGTGTTGAACTGTTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCTCTATGGCCATAAGTGACCTTAAGAGAGCCAACCTCGTGAAAGGATCAAGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATCTCCACTATTGGTTTGTTCAGAACTTGAGAAGGCCCTTAGATCCAAGCCATTAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCAACAACACTGCCGACCACGAGAGGATCTCTACGACTTAAAGACAT 1
                                                                                                                                                                        Submitted (17-MAY-1999) Mitsuo Omura, National Institute of Fruit Tree Science, Department of Citriculture, Okitsu; Okitsu, Shimizu, Shizuoka 424-0292, Japan (B-mail:om9330@okt.affrc.go.jp, Tel:81-543-69-7108, Fax:81-543-69-2115)
                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Sapindales; Rutaceae; Citrus.
                                                                                                                                                                                                                                                                                                                                                                                            Citrus unshiu (strain:Miyagawa-wase satsuma mandarin) stage juice sac and pulp segment cDNA to mRNA. Citrus unshiu
                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                            2 (bases 1 to 745)
Omura, M., Kobayashi, Y. and Araki, T.
                                                                                                                                                                                                                                                                       Science 286 (5446), 1960-1962 (1999)
20050958
                                                                                                                                                                                                                                                                                                Kobayashi,Y., Kaya,H., Goto,K., Iwabuchi,
A pair of related genes with antagonistic
flowering signals
                                                                                                                                                                                                                                                                                                                                                                                                                                    AB027456.1 GI:4903138 C1FT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Citrus unshiu CiFT mRNA,
                                                                                                                                                                                                                                                                                                                                          (sites)
                          /gene="CiFT"
96. .629
                                                                                                         /organism="Citrus unshiu"
/strain="Miyagawa-wase satsuma
/db_xref="taxon:55188"
                                                                /dev_stage="developing stage juice sac and pulp segment"
/note="partial sequence (pcMFRI727.131) is deposited in
Accession Number C24153"
 /gene="CiFT"
/note="extensive
                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         745 bp
complete
homology
                                                                                                                                                                                                                                                                                                                        Iwabuchi, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
cds.
 6
 Ŧ
                                                                                                                       mandarin"
 (FLOWERING LOCUS
                                                                                                                                                                                                                                                                                                              roles
                                                                                                                                                                                                                                                                                                             Araki,T.
in mediating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLN
                                                                                                                                                                                                                                                                                                                                                                                                                      developing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-FEB-2000
 Η
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               386
                                                                                                                                                                                      RESULT 14
AX478001/c
LOCUS
                                                                                                                                                            DEFINITION ACCESSION
                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                              닭
                                                                                                                                                                                                                                                                                                                                   γ
                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                      REFERENCE
                                                                                                                                                                                                                                                          밁
                                                                                                                                   KEYWORDS
                                                                                                                                                 VERSION
            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                            637
                                                                                                                                                                                                                                                                                                                                                                                                                                                577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          613
                                                                                                                                                                                                                                                          133
                                                                                                                                                                                                                                                                                   757
                                                                                                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195
```

```
277 CTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCG 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACT 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTAGGCCTTCATAGTTCACAATCTCTTGCCCAAACCTGCCCCTGTGGTTGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCCAACAATAAGAGGATCTCTCTCCCTGCTAGACATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCTTACTATAAGAGGGTCTCTTATATTATAGACATCT 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACT 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACA 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGGTGCATAC 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCCGCCGGATCCGCTCTCCCTCTGGCAGTTGAAGTAGACAGCGGCCACCGGAGGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAATAGGTAATCCTCATTGGAATTGTTCTTGTAAAATTGTCAAGAACATCACCAACAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTAGGCTGGTTCAGAACTTCAGAAGGTTTGAGCTCACGGCCATTATTAACATCCTTGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGGATCAACCATTACCAAAGTATAAAATGTCCTAAGATCATCACCACCAATTTCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATATCAGTCACCAACCAATGCAAATACTCCCTAAGGCTGGGGTCACTTGGGCTTGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACAGTCTGCCTCCCAAGTTGCCGGAACAACACAAAGACAAACCTGTGAATCCCCCATCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACGACGATGAATTCCTGCAGTG 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGATTGTAAAGCTCAGCAAAATCCCTCGTGCTGAAGTTCTGACGCCACCCTGGTGCATAA
                                                                                                                                                                                                    Zea mays.
Zea mays
                                                                                                                                                                                                                                                                                                         Sequence
AX478001
Floral development genes
Patent: WO 0244390-A 11 06-JUN-2002;
E. I. du Pont de Nemours and Company
                                                                          Cahoon, E.B., Cahoon, R.E.,
                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC clade; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                 AX478001.1
                                                                                                                                                                                                                                                                                                                                                              AX478001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="BAA77836.1"
/db_xref="01:4903139"
/db_xref="01:4903139"
/translation="MSSRERDPLIVGRVVGDVLDNFTRTIPMRITYSNKDVNNGRELK
/translation="MSSRERDPLIVGRVVGDVLDNFTRTIPMRITYSNKDVNNGRELK
PSEVLNQPRAEIGGDDKFTYTLVMVDPDAPSPSDPSLREYLHWLVTDIPATTGASFG
OEIVNYESPRPTMGIHRFVFVLFRQLGRQTVYAPGWRQNFSTRDFAELYNLGPPVAAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            similar to mammalian phophatidylethanolamine binding protein (PEBP) and hippocampal cholinergic neurostimulating peptide (HCNP) precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YFNCQRESGSGGRPVRR"
150 c 180 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AB027504) and TSF (TWIN SISTER OF Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
                                                                                                                                                                                                                                                                                    GI:22217011
                                                                                                                                                                                                                                                                                                                                    from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33.8%;
72.3%;
                                                                                                                                                                                                                                                                                                                                 Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 289.6; DB 8;
Pred. No. 5.1e-58;
0; Mismatches 144;
                                                                                                                                                                                                                                                                                                                                 899 bp
W00244390
and Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                          Klein, T.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               220 t
(US)
                                                                          Rafalski, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FT, AB027506) genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                             and Sakai,H
                                                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                              12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                  RESULT 15
AB052943/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 346
                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Sir
hes 346;
                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTTCTTCCTCCGCAGCCACTCTCCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAG
                                                                                                                                                                                                                                                                                                                                                                                      TACGTTGCCTACAACAAGTGGGTCCCTT 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCCACCAATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTIGGCTITGGGCTTTCATAGCTTACTACCTCATTTCCAAAGCTCACATCTGTTGATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTGGGACTTGGATTTTCGTAACACAAACTCTCATTGCCAAAGGTTGTTCCAGTTGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAAATAGTTTGCCTGACAGATTGGCGGACCAGAACAAGACGAAGCGATGTATTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTAGATTATAGAGTGCTGAGAAGTCTCTTGTGTTGAAATTTTGTCTCCATCCTGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                AACTCTGCTTACTATAAGAGGGTCTCTT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGTTGTATAGGACTCTGAGTGATGCTGATTTGATAAATGGGTCCAAGATATCTCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGAATATCTGTCACCAACCAGTGAAGGTACTCTCTTTTTGTTGGATTGCTTGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATCCTTGGTTCATAAGCTACTTGCGATGGCCTGAACTCAGATCCATTAGTCAGTTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAGTCAGGATCCACCATTACCAAAGTGTAAAGGGTCCTCATGTCATATCCAGCAATCTC
                                                                                                                                mRÑA.
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                        AB052943
AB052943.1
2 (bases 1 to 847)
Yano, M. and Kojima, S.
Direct Submission
Submitted (33-DEC-2000) Masahiro Yano, National Institute of Agrobiological Resources, Department of Molecular Genetics; Kannondai, Tsukuba, Ibaraki 305-8602, Japan
                                                                                                                                                                                                                                                                                    AB052943 847 bp ml
Oryza sativa (indica cultivar-group)
cultivar:Kasalath.
                                                                                     Unpublished
                                                                                                  flowering
                                                                                                               Kojima, S., Monna, L., Fuse, T., Sasaki, T. and Yano, M. Hd3a, a quantitative trait locus, involves in the p
                                                                                                                                                                                                                               Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:4577"
187 c 185 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="2ea mays"
                                                                                                     in rice
                                                                                                                                                                                                                                                          GI:14517621
                                                                                                                                                                                                                              (indica cultivar-group) (cultivar:Kasalath) cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        185 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 248.8;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3; DB 6;
2.2e-48;
nes 162;
                                                                                                                                                                                                                                                                                                   mRNA
p) Hd3a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                  mRNA,
                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                  complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 668
                                                                                                                 promotion
                                                                                                                                                                                                                                                                                                                PLN 21-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                     cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332
                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   141
                                                                                                                  of.
                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

٠,٠

```
Ş
Search completed: May
Job time : 2870 secs
                                                                                         Ş
                                                                                                                        밁
                                                                                                                                                                                    밁
                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                           746
                                                                                                                                                     686
                                                                                                                                                                                    327
                                                                                                                                                                                                                   626
                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                                              566
                                                                                                                                                                                                                                                                                                             447
                                                                                                                                                                                                                                                                                                                                            506
                                                                                                                                                                                                                                                                                                                                                                           507
                                                                                                                                                                                                                                                                                                                                                                                                        446
                                                                                                                                                                                                                                                                                                                                                                                                                                       567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 687
                                                             207
                                                                                                                          267
                                                                                           CTCCAACAACTCTGCTTACTATAAGAGGGTCTCT
                                                                                                                                                                                                                                                                 GACTIGGAACAICIGGAATCCACCATAACCAAAGTATAGAAGTICCTGAGGTCTICTCCAC
                                                                                                                                                                                                                                                                                                                           TTGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTTGAGGGTTGCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGGCGCGTACACTGTCTGACGCCCCAGCTGCTGGAACAGCACGAACACCAGCCGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAGACCCTCCTGCCGCCGGAGCCGGCCTCGCGCTGGCAGTTGAAGTAGACGGCGGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTAAAGTCTTCCTTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCA
                                                             CACCCACAACCCTACCAACCACAAGAGGGTCCCT
                                                                                                                          CGGTCTTGGAGCCATAGGTGACCTTGAGGTTGGTGCTCCGGACGAACGCGTCCAGCACAT
                                                                                                                                           CCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGT
                                                                                                                                                                                    CGACCTCGACCCTAGGCTGGGTGGCTGACCATGGACGCCTTGAGCTCGCAGCCATTGGACA
                                                                                                                                                                                                                   CAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCA
                                                                                                                                                                                                                                                  GGCTTGGTGCATCTGGGTCTACCATCACAAGGGTGTAGAATGTCCTCATGTCATTGCCGC
                                                                                                                                                                                                                                                                                                              TAGTACCAGGAATATCAGTGACCAACCAATGTAGATACTCCCTAAGGTTAGGGTCACTTG
                                                                                                                                                                                                                                                                                                                                                                           TCCCCATGGTTGGCCTTGGGCTCTCGTAGCACATCACCTCTTGCCCAAATGACGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                        TTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGGCGAGCCGAGGTTGTAGAGCTCGGCGAAGTCCTTGGTGTTGAAGTTCTGACGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (E-mail:myano@abr.affrc.go.jp, Fax:81-298-38-7468)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ည
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="Bab61029.1"
/protein_id="Bab61029.1"
/db_xref="GI:14517622"
/translation="MACSGRDRDPLVVGRVVGDVLDAFVRSTNLKVTYGSKTVSNGCE/translation="MACSGRDRDPLVVGRVVGDVLDAFVRSTNLKVTYGSKTVSNGCELKPSMVTHQPRVEVGROHDMRTFYTLVMVDPDAPSPSDPNLREYLHWLVTDIPGTTAAS
EGQEVMCYESPRPTMG.HRLVFVLFQQLGRQTVYAPGWRQNFNTKDFAELYNLGSPVARVYFNCQREAGSGGRRVYN"
228 c 224 g 194 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Oryza sativa
/cultivar="Kasalath"
/db_xref="taxon:39946"
/chromosome="6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="Hd3a"
153. .692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="Hd3a"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  codon_start=1
              1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29.0%;
                2003,
                23:31:13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 248.4; DB 8;
Pred. No. 2.8e-48;
0; Mismatches 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel:81-298-38-7443
                                                             174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (indica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cultivar-group) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                            625
                                                                                                                                                                                                                                                                                                                                                                 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              325
                                                                                                                                                     745
                                                                                                                                                                                    268
                                                                                                                                                                                                                   685
                                                                                                                                                                                                                                                                                                                                            565
                                                                                                                                                                                                                                                                                                                                                                                                        505
                                                                                                                                                                                                                                                                                                                                                                                                                                       508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   568
                                                                                                                          208
                                                                                                                                                                                                                                                  328
                                                                                                                                                                                                                                                                                                              388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                         Result
         0 0 0 0 0 0 0
                                                                                                                                                         No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
::
                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
      856
856
692.4
692
528
528
377.6
374.4
180.2
                                                                                                                                                        Score
                                                                                                                                                        Query
Match
      100.0
100.0
80.9
80.8
61.7
44.1
43.7
21.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-845-849-3
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                May 2, 2003, 02:33:53; Search time 282.5 Seconds (without alignments) 6823.754 Million cell updates/sec
                                                                                                                                                                                                                                                                                               10:
111:
112:
113:
113:
114:
115:
116:
117:
118:
119:
120:
120:
120:
121:
122:
123:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                    2: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
2: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
3: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
5: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
5: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1984.DAT:*
6: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
7: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
8: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
9: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
9: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
10: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
11: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
12: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
13: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*
14: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:*
15: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*
16: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:*
17: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
18: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
19: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
20: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2000.DAT:*
21: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2000.DAT:*
22: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2000.DAT:*
23: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
24: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
25: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ctcgagttttttttttttt.....ggggatccactagttctaga 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.5
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:
                                                                                                                                                        Length
                                                                                                                                                         DB
                                                                                                                                                         H
                                               AAZ28491
AAZ28491
AAC34682
AAC48359
AAA60683
AAC42966
                    AAA60684
AAC90636
                                                                                                                                                                                                    SUMMARIES
Flowering locus T
Arabidopsis thalia
Arabidopsis thalia
Arabidopsis thalia
Arabidopsis thalia
Arabidopsis thalia
Strawberry floweri
                                                                                                                                                      Description
                                                                                                         Flowering locus T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ28490 standard; cDNA; 856
```

0400100070040	# 10 F C C W 4 0 F 0 F	
4444 88888 4444 4444 88888	9.99.50.51.	176 176 176 176 175 161.2 161.2 161.2 1.6 82.6 82.6 63 55.6
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		200.66 117.00.66 120.66 13.60 6.25
1012 956 2637 427 477 7589 367 939 939 939 910	1637 970 988 557 18585 649 503 925 978 83391	762 792 792 1225 1225 1225 1430 4512 929 929 929 1430 1430 1430 1430 1430 1430
222222222222222222222222222222222222222	20 224 224 224 224 224	224 224 224 224 222 222 224
ABA771106 ABA771106 ABN74279 AAD34120 ABQ54500 ABQ54500 AAK62481 ABK28390 AAS28106 ABN74051 AAF16381 AAF16381 AAF16381 AAF16381 AAF16381 AAF16381 AAF16381 AAF16381 AAF16381 AAF16381	AAZ30973 ABN73995 ABN74181 AAH35052 ABL34609 AAK60828 ABK41982 ABN74030 ABA77091	ABK82093 ABK82091 ABK82092 ABK82122 ABK82122 ABK821094 AAUG0668 AAUG0668 AAUG0149 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483 AAUG01483
·		
Proliferative glom Bovine embryonic g Human secreted pro Human ovarian, anti Human immune/haema DNA transcription Novel cDNA encodin Bovine embryonic g Human colon cancer Bovine embryonic g Bovine embryonic g	Porcine complement Bovine embryonic g Bovine embryonic g Houman colon cancer Human metastasis a Human immune/haema cDNA encoding nove Bovine embryonic g Proliferative glom Proliferative glom	Novel floral meris DNA encoding novel Movel floral meris DNA encoding novel DNA encoding novel DNA encoding novel Novel floral meris Strawberry floweri Arabidopsis pathog Anthribinum centro Arabidopsis termin OV-16 antigen. On United the control of the control Strawberry floweri Human ovarian anti Spinach lycopene

ALIGNMENTS

ВP

RESULT 1
AAZZ8490/c
ID AAZZ84
XX AAZ284
AC AAZ Weigel D; (SALK) SALK INST BIOLOGICAL STUDIES 15-APR-1998; 13-APR-1999; 21-OCT-1999. WO9953070-A1. Arabidopsis thaliana. Flowering locus T gene; FT; flowering time; modulator; early flowering; antibody; cellular binding protein; crop; ss. Flowering locus T (FT) gene 17-JAN-2000 AAZ28490; (first entry) 98US-0060726 99WO-US08151 Location/Qualifiers 63..590 /product= FT
/note= "Flowering locus T" /*tag= a

```
Ş
                      밁
                                        δÃ
                                                              밁
                                                                                  Š
                                                                                                         밁
                                                                                                                                                   밁
                                                                                                                                                                       Ş
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                          ő
                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                            õ
                                                                                                                                                                                             밁
                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence is the flowering locus T (FT) gene of Arabidopsis thaliana. FT regulates flowering in plants by modulating flowering time. Overexpression of FT results in early flowering, while loss of function mutations or antisense directed to FT causes late flowering. The FT polypeptide has a molecular weight of approximately 20kD, and is located on chromosome 1. The FT polypeptide is used in the invention to modulate flowering time in many mono and di-cotyledonous plants. The FT polypeptide, and as a source of antisense, ribozyme or triplex forming sequences. The FT polypeptide can also be used to raise antibodies and to screen for modulators or cellular binding proteins. The methods of the invention allow for the production of crops at any time of year.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      particularly used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New flowering locus T polypeptide that regulates flowering
  661
                                                                316
                                                                                     541
                                                                                                                                481
                                                                                                                                                    436
                                                                                                                                                                         421
                                                                                                                                                                                              496
                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                       556
                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                            796
                                                                                                                                                                                                                                                                                                                                                                                                                                                     856
                                                                                                                                                                                                                                                                                                                                                                   736
                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                         TAATTATCGCATCACACACTATATAAGTAAAACACTCTCATTTTCCTCCCCCTCTCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                            CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCCTC
GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                TAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                 1999-611305/52
DB; AAY49098.
                                                                                                                                                                                                                                                          TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                               CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                          TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5; Fig 2; 64pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        856 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263 A; 150 C; 194 G; 249 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      accelerate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 856; DB 20; Pred. No. 3.8e-190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                          660
                                                                                                                                                                       480
                     197
                                                               257
                                                                                   600
                                                                                                        317
                                                                                                                             540
                                                                                                                                                   377
                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                  677
                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                     797
                                                                                                                                                                                            437
                                                                                                                                                                                                                                      497
                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                          617
                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                           737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

Ş

CTCGAGTTTTTTTTTTTTTTTTTTATAAATATAACACTTCATTTCATGTAGATTAATA

Matches Query Match Best Local

Similarity

100.0%; A

; Score 856; D; Pred. No. 3.8

DB 20; 3.8e-190;

0;

Indels

0;

0

60

B₽;

249

194 C;

150 <u>ن</u>

263 T;

0 other;

Conservative

0.

```
RESULT 2
AAZ28491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                       This is the flowering locus T (FT) gene antisense polynucleotide sequence. This sequence is used in the production of the antisense construct of the invention pSKIO60. FT regulates flowering in plants by modulating flowering time. Overexpression of FT results in early flowering, while loss of function mutations or antisense directed to FT causes late flowering. The FT polypeptide has a molecular weight of approximately 20kD, and is located on chromosome 1. The FT polypeptide is used in the invention to modulate flowering time in many mono and di-cotyledonous plants. The FT polypeutide sequence is used for recombinant production of the polypeutide, and as a source of antisense, ribozyme or triplex forming sequences. The FT polypeptide can also be used to raise antibodies and to screen for modulators or cellular binding proteins. The methods of the invention allow for the production of crops at any time of year.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Flowering
antibody;
                                                                                                                                                                                                                                                                       New flowering locus T polypeptide that regulates flowering particularly used to accelerate flowering
                                                                                                                                                                                                                                            Example 2;
                                                                                                                                                                                                                                                                                                                WPI; 1999-611305/52
                                                                                                                                                                                                                                                                                                                                              Weigel
                                                                                                                                                                                                                                                                                                                                                                                                   15-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                              13-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09953070-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ28491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ28491 standard;
                                                                                                                                                                                                                                                                                                                                                                       (SALK ) SALK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                            D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           locus T g
                                                                                                                                                                                                                                           Fig 3; 64pp;
                                                                                                                                                                                                                                                                                                                                                                         INST BIOLOGICAL STUDIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US08151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T gene; FT; flowering time; modulator; early flowering; lar binding protein; crop; antisense construct; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (FT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      insert.
                                                                                                                                                                                                                                                                                       time,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
```

```
RESULT 3
AAC34682/c
ID AAC34682 standard; E
XX
AC AAC34682;
XX
DT 17-OCT-2000 (first
XX
DE Arabidopsis thaliana
XX
DE Hybridisation assay;
KW protein identificati
KW metabolic pathway; px
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                               β. δ
                                                                                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                          Š
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
             Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                     ATATTTATAGACATCTTTGATCTTGAACAAAACCTCGTGCTGAATTCCTGCAGCCCGGGGG
                                                                                                                                                                                                                                                         TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                           TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAATTATCGCATCACACACTATATAAGTAAAACACTCTCATTTTCCTCCCCCCTCTCATTT
                                                                                                                                                                          ATCCACTAGTTCTAGA
                                                                                                                                                                                    ATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thaliana
                                                                                                                   DNA;
            promoter;
                                                                         entry)
                                                     DNA fragment
                                                                                                                                                                        856
                                                                                                                   775
                                                                                                                    ВÞ
            termination sequence;
                                                      SEQ
                                                      IJ
                                                      NO:
                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
   25-FEB-1999
05-MAR-1999
09-MAR-1999
23-MAR-1999
23-MAR-1999
06-APR-1999
06-APR-1999
16-APR-1999
16-APR-1999
23-APR-1999
23-APR-1999
23-APR-1999
23-APR-1999
23-APR-1999
30-APR-1999
30-APR-1999
31-APR-1999
31-APR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP1033405-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000EP-0301439
99US-0121825.
99US-0125788.
99US-0125788.
99US-0125788.
99US-0126768.
99US-0126768.
99US-0126768.
99US-0127462.
99US-0130910.
99US-0130449.
99US-013248.
99US-013248.
99US-013248.
99US-013248.
99US-013248.
99US-013248.
99US-013248.
99US-0134218.
99US-0134218.
99US-0134218.
99US-0134218.
99US-0134218.
99US-0134221.
99US-013422.
99US-013422.
99US-013422.
99US-013423.
99US-013425.
99US-0139452.
99US-0139453.
```

```
990S-0141287
990S-014287
990S-014289
990S-0142920
990S-0142920
990S-0143624
990S-0144362
990S-0144085
990S-0144332
990S-0144332
990S-0144332
990S-0144333
990S-0144333
990S-0144333
990S-0144333
990S-0144333
990S-0144333
990S-0144333
990S-0144333
990S-0145088
990S-0145087
990S-0146884
990S-014923
                                   õ
                                                                   δÃ
                                                                                               Ş
                                                                                                                  밁
                                                                                                                                Ş
                                                                                                                                                            δÃ
                        밁
                                                      밁
                                                                                     밁
                                                                                                                                               밁
                                                                                                                                                                             밁
                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 693; Conser
                                                                                                                                                                                                                                       15-SEP-1999
16-SEP-1999
20-SEP-1999
23-SEP-1999
24-SEP-1999
24-SEP-1999
26-SEP-1999
05-OCT-1999
06-OCT-1999
07-OCT-1999
        479
                       458
                                      419
                                                      518
                                                                     359
                                                                                     578
                                                                                                                  638
                                                                                                                                               869
                                                                                                                                                               179
                                                                                                                                                                                            119
                                                                                                  299
                                                                                                                                239
                                                                                                                                                                             758
                      CATAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAAT
80.9%;
nilarity 99.9%;
Conservative
                                                                                                                                                                                                                                       9908-0154018
9908-0154779
9908-0155469
9908-0155659
9908-0155659
9908-0157117
9908-0157117
9908-0157865
9908-015832
9908-0158339
9908-015832
9908-0158339
9908-0159393
9908-0159393
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
9908-0159331
                                                                                                                                                                                                          0
                                                                                                                                                                                                         Score 692.4; DB 21;
Pred. No. 5.3e-152;
0; Mismatches 1;
                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                        Length
                                                                                                                                                                                                          0
                                                                                                                                                                                                      Gaps.
                                      478
                                                                                                                                                                                          178
        538
                                                                    418
                                                                                  519
                                                                                                  358
                                                                                                                 579
                       399
                                                      459
                                                                                                                                               639
                                                                                                                                                             238
                                                                                                                                                                            699
                                                                                                                                298
                                                                                                                                                                                                          0
```

30-JUN-1999
01-JUL-1999
01-JUL-1999
02-JUL-1999
08-JUL-1999
18-JUL-1999
11-JUL-1999
12-JUL-1999
13-JUL-1999

A A C X X X X X X X X X X X X X X X X X	
T 4 AAC48359 sta AAC48359; 18-OCT-2000 Arabidopsis Hybridisatio protein iden metabolic pa Arabidopsis EP1033405-A2 06-SEP-2000; 25-FEB-1999; 05-MAR-1999; 05-MAR-1999; 06-APR-1999; 25-MAR-1999; 16-APR-1999; 25-APR-1999; 25-APR-1999; 25-APR-1999; 25-APR-1999; 26-APR-1999; 27-APR-1999; 28-APR-1999; 29-MAY-1999; 21-APR-1999; 21-AP	398 CAATCTCAT 539 GATATTCTC 539 GATATTCTC 338 GATATTCTC 599 TATAGAAGT
standard; DNA; 754 BP. ; ; ; ; ; ; ; ; ; ; ; ; ;	GARATTTCTCATTGCCAAAAGGTTGTTCCAGTTGTAGCAGGATATCAGTCACCAATGGA 339 GATATTCTCGGAAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCACCAATGGA 339 GATATTCTCGGAAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAG 598 [
	סי ס
ים דיים דיים דיים דיים דיים דיים דיים ד	
	9-MAY-199 0-MAY-199 1-MAY-199 5-MAY-199 5-MAY-199 7-MAY-199 7-MAY-199 1-JUN-199 3-JUN-199 0-JUN-199 0-JUN-199 6-JUN-199 6-JUN-199 8-JUN-199 8-JUN-199 8-JUN-199
990S-0139458 990S-0139459 990S-0139461 990S-0139461 990S-0139462 990S-013963 990S-013963 990S-0149353 990S-0140354 990S-014040353 990S-0140287 990S-0142154 990S-0142803 990S-0142803 990S-0142803 990S-0142803 990S-01442803 990S-01442803 990S-01442803 990S-01442803 990S-0144352 990S-0144352 990S-0144353 990S-0144353 990S-0144333 990S-0145085 990S-0145085 990S-0145085 990S-0145085 990S-0145085 990S-0145214 990S-0145214 990S-0145214	903-011 903-011 903-011 903-011 903-011 903-011 903-011 903-011 903-011 903-011 903-011 903-011

3-JUL-1999; 3-AUG-1999; 1-AUG-1999;

-1999

```
RESULT 5
AAA60683/c
ID AAA606
XX AAA606
AC AAA606
XX
DT 26-OCT
DX
DE Arabid
XX
DKW Solar
XX
                                                                                                                                    В
                                                                                                                                                 Q
                                                                                                                                                               밁
                                                                                                                                                                            Ω
                                                                                                                                                                                            밁
                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                       Q.
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                         Вþ
                                                                                                                     Š
                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PR
PR
PR
PR
PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 80.8%; S
Best Local Similarity 100.0%;
Matches 692; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-OCT-1999;
26-OCT-1999;
28-OCT-1999;
28-OCT-1999;
28-OCT-1999;
29-OCT-1999;
        Arabidopsis thaliana; Cruciferae; plant; control; flowering; solar radiation; ds.
                            Arabidopsis thaliana nucleotide sequence SEQ ID
                                          26-OCT-2000
                                                        AAA60683;
                                                                      AAA60683
                                                                                                                                     154
                                                                                                                                                 721
                                                                                                                                                                                                          601
                                                                                                                                                                                                                        334
                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                   394
                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                              454
                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                           514
                                                                                                                                                                                                                                                                                                                                      574
                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                   634
                                                                                                                                                                                                                                                                                                                                                                                              694
                                                                                                                                                                214
                                                                                                                                                                             661
                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                         754
                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                      781
                                                                                                         94
                                                                                                                                   CGAGTGTTGAAGTTCTGGCGCCACCCTGGTGCATACACTGTTTGCCCTGCCAAGCTGTCGA
                                                                                                                                                                                                                                                                                                                                     ATATTTATAGACATCTTTGATCTTGAACAAAC
                                                                                                                                                               GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                                                           CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                                                                   CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                                                                                              TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                                                     TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                      standard;
                                          (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0161360.
99US-0161361.
99US-0161920.
99US-0161992.
99US-0161993.
99US-0162142.
                                                                      DNA;
                                                                      528
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 692; DB; Pred. No. 6.5; 0; Mismatches
                                                                      вр
                                                                                                         63
                                                                                                                       812
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21
6.5e-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                            NO:2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 754;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                       275
                                                                                                                                                                                         215
                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                              720
                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                           455
                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                  575
                                                                                                                                                                                                                                                                                                                                                                                              635
                                                                                                                                                                                                                                                                                                                                                                                                                          695
                                                                                                                                                                                                                                                    335
                                                                                                                                                                                                                                                                               395
                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                     95
                                                                                                                                                   780
                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                       515
                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

99US-0145951
99US-0146388
99US-0146388
99US-0147038
99US-0147704
99US-0147720
99US-0147726
99US-0147726
99US-01477493
99US-0147493
99US-0147493
99US-0148341
99US-0149426
99US-0149426
99US-0149426
99US-0149426
99US-0149426
99US-0149426
99US-015066
99US-015066
99US-015066
99US-015066
99US-015066
99US-015067
99US-0150758
99US-0151080
99US-01551330
99US-01551330
99US-01551330
99US-01551330
99US-01592331
99US-0160770
99US-0160776
99US-0160811
99US-0161400
99US-0161400
99US-0161400
99US-0161400
99US-0161400
99US-0161400

28-JUL22-AUG22-AUG22-AUG22-AUG22-AUG22-AUG23-AUG24-AUG24-AUG25-AUG26-AUG27-AUG

-1999

10-SEP-1999
13-SEP-1999
15-SEP-1999
16-SEP-1999
20-SEP-1999
22-SEP-1999
23-SEP-1999
23-SEP-1999
24-SEP-1999
28-SEP-1999
29-SEP-1999
04-OCT-1999
06-OCT-1999
07-OCT-1999

08-OCT-1999; 12-OCT-1999; 13-OCT-1999; 13-OCT-1999; 13-OCT-1999; 14-OCT-1999;

18-OCT-1999 21-OCT-1999 21-OCT-1999 21-OCT-1999 21-OCT-1999 21-OCT-1999 21-OCT-1999 22-OCT-1999 22-OCT-1999 25-OCT-1999 25-OCT-1999 25-OCT-1999 26-OCT-1999

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the present invention describes a method to accelerate plant generation and generation accelerated plants. The method uses a controlling gene functioning in the downstream of a gene under the control of solar radiation to accelerate plant generation using a gene functioning to accelerate the flowering time regardless of solar radiation. The method can control flowering time regardless of solar radiation. The method can control flowering time to a desired period by shortening the juvenile stage. The present sequence represents a specifically claimed farabloopsis nucleotide sequence, which is used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A method plants -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TORA ) TORAY IND INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JP2000139250-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 447
                                                                                                                                                                                                                                             627
                                                                                                                                                                                                                                                                                                                           567
                                                                                                                                                                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                                     507
                                                                                                                                                                                                                                                                                                                                                                                                                                            348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      267
                                                                                                                                                                                                        168
                                                                                                                                                                                                                                                                                    228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Sin
les 528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTAAAGTCTTCCTCCCCCCACCACCCTCTCCCTCTGACAATTGTAGAAAACTGCGGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-425906/37.
DB; AAB12459.
                                                                                                                                             CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                       AATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC
                                                                                                                                                                                                                                                                                                                                                          TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTATAGACAT 794
                                                                                                                                                                                                                                                                                                     ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTAAAGTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCAC
                                           TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTATAGACAT 1
                                                                                                                        CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                    AATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC
                                                                                                                                                                                                                                                                                ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to accelerate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98JP-0320219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98JP-0320219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143 A; 111 C; 129 G; 145 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 528; DB 21; 1
Pred. No. 1.1e-113;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  generation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  generation accelerated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      326
                                                                                                                                                                                                                                           989
                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                     626
                                                                                                                                                                                                                                                                                                                                                                                                 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 409
                                                                                                                        49
                                                                                                                                                                                                  109
                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
  ARCSULT 6
AAC4296/C
AAC4299
XX
AAC4290
XX
AAC4299
XX
AAC4299
XX
AAC4299
XX
AAC4290
A
                                                                                                                                                         21 APR 1999
23 APR 1999
23 APR 1999
28 APR 1999
30 APR 1999
30 APR 1999
06 MAY 1999
06 MAY 1999
06 MAY 1999
11 MAY 1999
11 MAY 1999
12 MAY 1999
14 MAY 1999
14 MAY 1999
15 MAY 1999
16 MAY 1999
17 MAY 1999
18 MAY 1999
19 MAY 1999
20 MAY 1999
21 MAY 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hybridisation assay; genetic mapping; gene expression control; protein identification; signal transduction pathway; metabolic pathway; promoter; termination sequence; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAC42966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAC42966 standard; DNA; 528 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-APR-1999
16-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pathway; promoter; termination sequence; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thaliana DNA fragment SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000EP-0301439
990S-0132484

990S-0132487

990S-0132487

990S-0134256

990S-0134256

990S-0134271

990S-0134271

990S-0134370

990S-0135124

990S-0135124

990S-013529

990S-013529

990S-013529

990S-0136021

990S-0136782

990S-013782

990S-013782

990S-013782

990S-013782

990S-013782

990S-013782

990S-013782

990S-013782

990S-013782

990S-0138447

990S-0139452

990S-0139453

990S-0139453

990S-0139454

990S-0139454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0130077.
99US-0130510.
99US-0130510.
99US-0130891.
99US-0131449.
99US-0132048.
99US-0132407.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0128234.
99US-0128714.
99US-0129845.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        990S-0123180.
990S-0123548.
990S-0125788.
990S-0126264.
990S-01276785.
990S-0127462.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37529
```

δ 밁 Š 밁 δδ В Q Вb Ş 밁 Qy 밁 Qy 밁 QΥ 밁 δÃ

-JUN-1999; -JUN-1999; -JUN-1999;

18-JUN-1999
18-JUN-1999
18-JUN-1999
18-JUN-1999
21-JUN-1999
22-JUN-1999
23-JUN-1999
24-JUN-1999
24-JUN-1999
24-JUN-1999
24-JUN-1999
24-JUN-1999
26-JUN-1999
27-JUN-1999
28-JUN-1999
29-JUN-1999
29-JUN

```
Ş
                                В
                                              δõ
                                                                   B
                                                                                  δÃ
                                                                                                                                         Query Match 44.1%;
Best Local Similarity 82.2%;
Matches 434; Conservative
                                                                                                                                       20-SEP 1999
22-SEP 1999
23-SEP 1999
24-SEP 1999
24-SEP 1999
26-SEP 1999
06-OCT 1999
06-OCT 1999
07-OCT 1999
11-OCT 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-SEP-1999;
13-SEP-1999;
15-SEP-1999;
16-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-AUG
23-AUG
23-AUG
25-AUG
25-AUG
26-AUG
27-AUG
27-AUG
27-AUG
27-AUG
30-AUG
31-AUG
31-AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-SEP
408
               387
                                468
                                                  327
                                                                   528
                                                                                    267
         TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAAT
                                CGGTGCATAAACCGTTTGTCTTCCGAGTTGCCGGAACAATACCAACACAATACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -1999
-1999
                                                                                                                                       990S-0149929
990S-0149930
990S-0150566
990S-0151066
990S-0151066
990S-0151069
990S-01513030
990S-0151438
990S-0154038
990S-0154038
990S-0155408
990S-01554596
990S-0155458
990S-0155458
990S-0155458
990S-01557757
990S-0158232
990S-0158232
990S-01592331
990S-0159233
990S-0159233
990S-0159233
990S-0159233
990S-0159233
990S-0159233
990S-0159233
990S-0159233
990S-0160741
990S-0160815
990S-0161404
990S-0161359
990S-0161404
990S-0161359
990S-0161359
990S-0161359
990S-0161404
                                                                                                   Score 377.6; DB 21 
Pred. No. 1.2e-78; 
0; Mismatches 94;
                                                                                                                      21;
                                                                                                      Indels
                                                                                                                      Length
                                                                                                                      528;
                                                                                                      0;
                                                                                                    Gaps
               446
349
                                409
                                                  386
                                                                   469
                                                                                    326
                                                                                                      0;
```

990S-0139459
990S-0139461
990S-0139461
990S-0139461
990S-0139763
990S-0140353
990S-0140353
990S-0140353
990S-0140823
990S-0140823
990S-0142050
990S-0143323
990S-0144332
990S-0144332
990S-0145089
990S-0146386
990S-0146386
990S-0146386
990S-0146386
990S-0147416
990S-0148141
990S-0148141
990S-0148141
990S-0148141
990S-0148141

16-JUL-1999; 19-JUL-1999; 19-JUL-1999; 19-JUL-1999; 19-JUL-1999; 19-JUL-1999; 19-JUL-1999;

20-JUL-1999 20-JUL-1999 20-JUL-1999 21-JUL-1999 21-JUL-1999 21-JUL-1999 22-JUL-1999 22-JUL-1999 23-JUL-1999 23-JUL-1999 23-JUL-1999 23-JUL-1999 27-JUL-1999 27-JUL-1999 27-JUL-1999 27-JUL-1999 27-JUL-1999 28-JUL-1999 28-JUL-1999 29-AUG-1999 07-AUG-1999 07-AUG-1999 08-AUG-1999 08-AUG-1999 08-AUG-1999 10-AUG-1999 11-AUG-1999 11-AUG-1999

```
RESULT 7
AAA60684/c
ID AAA6066
XX AAA6066
XX AAA6066
XX Arabid
XX (TORA
XX (T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÔ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                     Query Match
Best Local S
Matches 432
                                                                                                                                                                                                      the present invention describes a method to accelerate plant generation and generation accelerated plants. The method uses a controlling gene functioning in the downstream of a gene under the control of solar radiation to accelerate plant generation using a gene functioning to accelerate the flowering time regardless of solar radiation. The method can control flowering time to a desired period by shortening the juvenile stage. The present sequence represents a specifically claimed Arabidopsis nucleotide sequence, which is used in the exemplification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A method to accelerate plants .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arabidopsis thaliana; solar radiation; ds.
                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP2000139250-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA60684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA60684 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TORA ) TORAY IND INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTATAGACAT 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCTCTATGGCCATAAGTGACCTTAAGAGAGACCAACCTCGTGAAAGGATCAAGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-425906/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTGGAACATCTGGATCCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGGCAGGTATATCAGTCACCAACCAGTGGAGATATTCTCGTTGGTGAGGGTTGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCCGAGGGGGGGACGTCGTAGCACACCACCTCATTGCCAAAGGCATTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAACAACACTGCCGACCACAAGAGGATCTCTACGACTTAAAGACAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTCGGCACATCTGGATCCACCATAACCAAGGTGTAGAAATTTCTGAAGTCGTCTCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ن</u>
                                     al Similarity
432; Conserv
                                                                                                                                                                                         present
                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 5; 6pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                thaliana nucleotide sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thaliana
                                                                                                                                       BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                         invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98JP-0320219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98JP-0320219
                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                            43.7%;
                                                                                                                                       ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cruciferae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         plant generation and generation
                                                                                                                                       117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          528
                                                                                                                                    Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                     0
                                  Score 374.4; DB 21 Pred. No. 6.9e-78; D; Mismatches 96;
                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              plant;
                                                                                                                                       G;
                                                                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 control; flowering;
                                                                                                                                    Τ;
                                                                                  DB 21; Length
                                                                                                                                    0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO: 3
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            accelerated
                                                                                    528;
                                  0;
                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                               0;
RESULT 8
AAC90636/C
ID
AAC90636;
XX
AC AAC90636;
XX
AC AAC90636;
XX
DT 20-MAR-2001 (first XX
DE Strawberry flowering
XX
DE Strawberry; flowering
XX
DE Strawberry; flowering
XX
DE STRAGETY; flowering
XX
PM W0200071722-A1.
XX
PM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                               Novel nucleic acid involved in controlling plant flowering processes useful for generating transgenic plants, in particular strawberry plants having altered flowering behavior such as early, delayed or day-neutral flowering
                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAY-2000; 2000WO-US14297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGGCACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTATAGACAT 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTGGCAGGTATATCAGTCACCAACCAGTGGAGATATTCTCGTTGGTGAGGGTTGCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCAACAACACTGCCGACCACGAGAGGATCTCTACGACTTAAAGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCTCTATGGCCATAAGTGACCTTAAGAGAGACCAACCTCGTGAAAGGATCAAGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATCTCCACTATTGGTTTGTTCAGAACTTGAGAAGGCCTTAGATCCAAGCCATTAGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCGAGGGGGGACGTGGACTCTCGTAGCACCACCTCATTGCCAAAGGCATTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGTGCATAAACCGTTTGTCTTCCGAGTTGCCGGAACAATACCAACACAATACGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGAAGACCAAGATTGTAGATCTCAGCAAACTCACGAGTGTTGAACTGTTGGCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   flowering regulation protein coding sequence
                                                                                                                                                                                                                                        Gutterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           flowering fruit prod
                                                                                                                                                                                                                                                                                           PLANT TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                          99US-0318789
2000US-0318789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                        Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           regulation;
duction; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               522
                                                                                                                                                                                                                                                                                           CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      floral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   homeotic
```

gene;

š

SEQ field IJ crop; NO:

ū

49

109 686 169 626 229 566 506 349 446 409 386 469

```
RESULT 9
AAT66101
ID AAT6
XX
AC AAT6
XX
AC AAT6
XX
DT 24-J
XX
DT 24-J
XX
VI
ATABLE
TO ATABLE
XX
TOTAL
XX
TOTAL
XX
TOTAL
XX
TOTAL
XX
TOTAL
XX
FT CDS
FT muta
                                                                                                                                                                                                                                8 8
                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                              3140/c
AAT60140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention provides the nucleic acid and protein sequences of a number of proteins from the strawberry which are involved in the regulation of flowering. These were identified using primers based on the homologous sequences from A. thaliana, B. napus and R. sativus. They can be used in the production of transgenic field crops whose flowering is regulated and the time of fruiting and harvesting can be manipulated.
                     mutation
                                                                                       Terminal flower 1; tfl1; transgenic plant; ss.
                                                                                                                    Arabidopsis
                                                                     Arabidopsis
                                                                                                                                         24-JUN-1997
                                                                                                                                                             AAT60140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                          694
                                                                                                                                                                                                                                                                                                            158
                                                                                                                                                                                                                                                                                                                               637
                                                                                                                                                                                                                                                                                                                                                                                                         517
                                                                                                                                                                                                                                                                                                                                                                                                                            338
                                                                                                                                                                                                                                                                                                                                                                                                                                                457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337
                                                                                                                                                                                                                                                                                                                                                 218
                                                                                                                                                                                                                                                                                                                                                                    577
                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    397
                                                                                                                                                                                                                                                  754
                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                     98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGTCTTCTTGCAGCAGTTTCCCTCTGGGCATTGAAGAAGACAGCAGCACCACCGGAAGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCCTCCGCAGCCACTCTCCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCG
                                                                                                                                                                                                                                          ACTCTGCTTACTATAAGAGGGTCTCTTATATTT
                                                                                                                                                                                                                                                                                                                                                                                                 ATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACTTGGATTTTCGTAACACACACATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTCGTTTGTTTCTGCAAACTTTCGACTGTCGAAATGGTCCTTCGAAGGAGGAGGAATC
                                                                                                                                                                                                                                                                     TTAGGCTTGACGGTTACAGAGGAAGGATATAGCTCATGCCCATTATACACCTTCTTGCTG
                                                                                                                                                                                                                                                                                                                      CTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC---CTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCTCGGCATTTCATTTTCACCACCTCCCTTCCAAATGTGTTGTCAGTTGTTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGTCTGCCTACCTTTCTGTTTGAACAAAAGGAACACAAACCTGTGGATCCCTATGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACGACGATGAATTCCTGCAGTG
                                                                                                                                                                                                                                                                                        TGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACA
                                                                                                                                                                                                                                                                                                                                                TCTGGGTCAGTCATGACCAGTGTAAAGAAAGATCTCATATCGCCTCCATGAACTTCAACC
                                                                                                                                                                                                                                                                                                                                                                  TCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACT 636
                                                                                                                                                                                                                                                                                                                                                                                     ATGTCCGTGACTATCCAGTGCAAGTGCTCCTTCAGGTAAGGATCACTAGGACCTGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCTGGTGCATAC
                                                                                                                                                                                                                               ACTCTTCCAACAACAAGAGGATCTGAGATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     al Similarity
312; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page
                                                                    thaliana var.
                                                                                                                      terminal flower1 (tfl1) cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP; 147 A; 111 C; 129 G; 135 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59-60;
   /*tag-
/note-
                                          16..
                              /*tag=
                                                  ocation/Qualifiers
                                                                                                                                                                               CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97pp;
  "tf11-14
                                Ø
             σ
                                                                                                  centroradialis;
                                                                                                                                                                               899
                                                                     Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 180.2; 1
Pred. No. 1.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                               В₽
   allele
   has
                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.3e-32
                                                                                                  cen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
   н
  at
                                                                                                  gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22;
  position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                       753
                                                                                                                                                                                                                                                                     39
                                                                                                                                                                                                                                                                                                           99
                                                                                                                                                                                                                                                                                                                              693
                                                                                                                                                                                                                                                                                                                                                159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 336
                                                                                                                                                                                                                                                                                                                                                                                     219
                                                                                                                                                                                                                                                                                                                                                                                                                           279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>,,</u>
δ.
                    ₽
                                  δÃ
                                                         밁
                                                                          Qy
                                                                                                밁
                                                                                                                Qy
                                                                                                                                       밁
                                                                                                                                                        Ş
                                                                                                                                                                              밁
                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                      Q
```

```
A cDNA clone (AAT60140) codes for the terminal flower1 (TFL1) protein (AAW13945) of Arabidopsis thaliana. It was obtd. from an Arabidopsis expressed sequence tag, clone 129D77. A genomic till clone (AAT60142) has also been obtd. The wild-type role of the till gene is to inhibit flowering and to prevent the apical meristem from switching to a floral fate. The till gene was identified as a homologue of the Antirrhinum centraradialis gene (see also AAT60141). The flowering characteristics of transgenic plants, esp. switching of apical meristem to a floral fate and the timing of flowering, can be manipulated by regulating cen or till gene expression.
                                                                                                                                                                                                                                                                                    Antirrhinum majus centroradialis gene and Arabidopsis homologue, Tfll - control switching of apical meristem to floral fate, use in plant hybridisation and in control of growing season
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mutation
  Sequence
                                                                                                                                                                                                                                                Claim 12; Fig 6a; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                   P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                         Bradley DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W09710339-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-SEP-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                   1997-202235/18
                                                                                                                                                                                                                                                                                                                                                                   AAW13945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                INNES
    899
    BP;
                                                                                                                                                                                                                                                                                                                                                                                                                         Carpenter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CENT JOHN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95GB-0018731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96WO-GB02276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
/note=
307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
329
195 A; 135 C; 147 G; 191 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
"tf11-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "tfl1-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "tfl1-13 allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                           Coen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                allele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      allele
                                                                                                                                                                                                                                                                                                                                                                                                                         ES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               274"
```

밁 Matches Query Match 650 349 470 409 469 353 529 229 289 410 293 TCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAG Local CAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGGT----GCATACACTGTTTGCCTGC GAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCT TAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTT TCCAGTGCAGGTGTTCTTTTAGAAAGGGGTCACTAGGACCTGGAACATCTGGGTCTATCA ACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACCTTGGAACATCTGGATCCACCA CATAGCTCACCACCTCTTTGCCAAACGTAGCATCTGTTGTGCCGGGAATGTTTGTAACGA CGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGGGATATCAGTCACCA GCTTCTGCCTGAACAGAACACAAACCTATGTATCCCTATGCTTGGCCTTGGCAATT CAAGCTGTCGAAACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTT CAAATTTACGAGTGTTGAAGTGATCTCTCGAAGGGATATTAGGAAAGATAACACGTCTTT TTTCTCTTTGTGCGTTAAAGAAGACGCCCGCGACAGGGGAGACCAAGATCATACTCGACCG TCACCAAAGTGAAGAAGGATCTGAGATCACCACCATGGATCTCAACCCTAGGCTTGGAGG 308; Similarity Conservative 20.7%; 0; Score 176.8; DB: Pred. No. 8.8e-32 0; Mismatches 19 DB 18; 197; Indels Length ω •• 352 649 230 589 290 529 350 469 409 470 1;

```
RESULT 10
ABK82093/
ID ABK82093/
ID ABK82093/
ID ABK8
XX ABK8
XX ABK8
XX ABK8
XX Nove
XX Nove
XX PY
XX HOME
KW Seed
KW Infl
KW Seed
KW Alle
XX ABK8
XX ABK8
XX INFL
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dd
The invention describes a substantially purified or isolated polypeptide CC (I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as CC MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like CC proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) and WADS-like proteins, Idomeo-box proteins (HB) CC Nucleic acid (II) encoding (I), a construct (III) comprising (II), or a construct (III) comprising (II), or a certor (IV) comprising (II), is useful for modifying plant life cycles and/or growth phases, flowering processes, flowering and/or plant CC architecture and/or flower and/or inflorescence development in a plant, CC which involves introducing (II), (III) or (IV) into the plant. The CC individual or simultaneous enhancement or downregulation of MADS-box gene activities may alter flower, embryo and seed development, e.g., CC enhance or inhibit embryo differentiation and growth or alter flower organ identity through conversion of one floral organ in another. CC Manipulation of CEN or HB activity in plants alters the control of phase CC thange, flowering time and the number of leaves made before flowering. Manipulation of AP2 activity in plants alters flower organ identity through conversion of plants alters flower organ identity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ryegrass; fescue; MADS-box; MADS; MADS-like protein; CENTRORADIALIS; CEN; CEN-like protein; APETALA2; AP2-like protein; HB; HB; Protein; HB-like protein; HB-li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass or fescue species, useful for controlling plant life cycles and/or growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (AGRI-)
(AGRE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Spangenberg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-OCT-2001; 2001WO-AU01311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200233091-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel floral meristem identity gene LpCENa contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABK82093 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-OCT-2000; 2000AU-0000873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lolium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGGTCTCTTATATTTATAGACATCTT 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCTCTATCACTCTAGTTCCCATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCATCTTAGTTGGTTGGAGTGAAGAATCAAGAACATCTCCTACCACTCTCCCCCATTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGRIC VICTORIA SERVICES AGRESEARCH LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sawbridge TI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 290pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PTY LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĘK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Emmerling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50
```

ABK82091/C
ID ABK82091/C
ID ABK82091/C
ID ABK82
XX
AC ABK82
XX
DT 27-AU
DT 27-AU
CXX
CEPT
KW RyegI
KW CEPT
KW CEPT
KW GER
KW HOmee
KW infic
KW seed
KW hybr:

DNA encoding

novel floral meristem identity protein LpCENa

27 - AUG - 2002

(first entry)

ABK82091; ABK82091

standard; cDNA; 792

ВP

```
δÃ
                                                                 В
                                                                                                 δõ
                                                                                                                                  망
                                                                                                                                                                δÃ
                                                                                                                                                                                                      В
                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               flowering plant architecture has a wide range of applications such as: inducing male sterility for hybrid seed production; changing flower architecture for enhancing value of ornamentals; delaying flowering in forage grasses thus stopping the formation of less digestible stems and increasing herbage quality; altering flowering time allowing early maturing crops; delaying vegetative phase to increase blomass production; increasing branching to enhanced business in fruit trees; altering plant size e.g. shorter plant stature; and in blocking thowering and reducing release for allergenic pollen. This sequence represents a contig polynucleotide novel floral meristem identity protein involved in floral development and a potential target for manipulating plant life cycles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the number of floral organs and flowering architecture. Manipulation
 142
                                                                                                   680
                                                                                                                                                                      620
                                                                                                                                                                                                       322
                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                            440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    622
                               737
                                                                   202
                                                                                                                                    262
                                                                                                                                                                                                                                       560
                                                                                                                                                                                                                                                                         382
                                                                                                                                                                                                                                                                                                          500
                                                                                                                                                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                               380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260 AAGCCATCTAAAGTCTTCCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Sin hes 312;
GAGAACTTCTCCAATGACACGACCAACAATAAGAGGCTC
                                 CAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTC
                                                                                                                                                                                                                                                                                            TTCCAGTTGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGT
                                                                                                                                                                                                                                                                                                                                          TGTGGATTCCAATGTTGGGCTTTGGGCTCTCATAGCTCATGACCTCCCCCCCAAATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGTCACC---TCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGAT
                                                                                                                                                                    CTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCAT
                                                                                                                                                                                                      CACTTGGTCCTGGCACATCTGGGTCCGCCATAACCAATGTGAATAAGGATCGCAAGTCAC
                                                                                                                                                                                                                                    TGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTT
                                                                                                                                                                                                                                                                         CATCTGTTGTCCCAGGTATATTACTGACAATCCAGTGAAGATGCTCCCGCAGATACGGAT
                                                                                                                                                                                                                                                                                                                                                                          GATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGGAAGGCACAGATACAGTCTGCCTTCGCTTCTGCTTGAAGAGCACAAAAATGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCACCCTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGC
                                                                   TGAAGACCAGCTTGTTTGAGTTATAGGTTGCTACCATCTTCACACATGGGTTAAATGGAT
                                                                                                                                    CCCCCTGAACCTCTACTCTTGGTTTAGATACAACTGCTGATGGGTAGAGCTCATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP; 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; 176 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 176; DB 24;
Pred. No. 1.4e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     205;
103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               379
                                                                                                   736
                                                                                                                                    203
                                                                                                                                                                    679
                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                                                                                                         559
                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                            499
                                                                                                                                                                                                                                                                                                                                                                                                             443
                                                                                                                                                                                                                                                                                                                                                                                                                                             439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1,
```

```
Š
                                         밁
                                                                           Q
                                                                                                                 밁
                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                          The invention describes a substantially purified or isolated polypeptide (I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as CC MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like (II) encoding, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) CC and HB-like proteins, or their functionally active fragments or variants. CC Mucleic acid (II) encoding (I), a construct (III) comprising (II), or a construct (IV) comprising (II), is useful for modifying plant life cycles architecture and/or flower and/or inflorescence development in a plant, CC which involves introducing (II), (III) or (IV) into the plant. The CC which involves introducing (II), (III) or (IV) into the plant. The CC enhance or inhibit embryo differentiation and growth or alter flower organ identity through conversion of one floral organ in another. CC Manipulation of CEN or HB activity in plants alters the control of phase change, flowering time and the number of leaves made before flowering. CC through conversion of one floral organ in another. Manipulation of AP2 activity in plants alters flower organ identity in plants alters flower organ identity in plants alters flower organ identity. CC through conversion of one floral organ in another. Heads to a change in the number of floral organs and flowering architecture. Manipulation of flowering architecture has a wide range of applications such as: inducing male sterility for hybrid seed production; changing flower of carchitecture for enhancing value of ornamentals; delaying flowering in CC inducing male sterility; altering flowering time allowing early conversing herbage quality; altering flowering time allowing early conversing to enhanced business in fruit trees; altering plant cc larget for manipulation plant life cycles.

CC declares for allergenic pollen. This sequence encodes a novel floral conversion and involved in floral development and a potential carrier for manipulation converses.
                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass or fescue species, useful for controlling plant life cycles and/or growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AGRI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 4; Fig 30; 290pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Spangenberg G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-OCT-2001; 2001WO-AU01311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200233091-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lolium perenne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         allergenic pollen;
       380
                                           565
                                                                                 320
                                                                                                                     625
                                                                                                                                                           260
                                                                                                                                           AAGCCATCTAAAGTCTTCCTTCCGCAGCCACTCTCCCCTCTGACAATTGTAGAAAACTG 319
                                                                                                                 2002-452388/48
GCCACCCTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAAACACGACAC
                                       CAGCCACAGGGAGGCCAAGATCATTATCCACAGCAAACTGGCGGGTGTTGAAATGATCCC
                                                                           CGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGC
                                                                                                                                                                                                                                                                                                            for manipulating plant life
                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGRIC VICTORIA SERVICES AGRESEARCH LTD.
                                                                                                                                                                                                                                                                          792
                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                        BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000AU-0000873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sawbridge TI,
                                                                                                                                                                                                                                                                        196 A; 181 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     floral meristem identity protein; gene;
                                                                                                                                                                                                                20.6%;
                                                                                                                                                                                                              Score 176; DB 2
Pred. No. 1.4e-3
                                                                                                                                                                                                                                                                        181 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ong
                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PTY LTD
                                                                                                                                                                                                                                                                                                              cycles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EX.
                                                                                                                                                                                                                                                                          232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Emmerling
                                                                                                                                                                                                                                  DB 24;
                                                                                                                                                                                                                                                                        T; 2 other;
                                                                                                                                                                                              205;
                                                                                                                                                                                                                                Length 792;
                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SS
                                                                                                                                                                                            ω
                                                                                                                                                                                          Gaps
 439
                                                                             379
                                                                                                                   566
                                       506
                                                                                                                                                                                            1;
```

The (I)

invention describes a substantially purified or from a ryegrass (Lolium sp.) or fescue (Festuca

isolated polypeptide
sp.) species, such a

such as

Claim 4; Fig 32;

290pp; English

CENTRORADIALIS, fescue species, phases -

New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass fescue species, useful for controlling plant life cycles and/or grow

```
RESULT 12
ABK82092/c
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                             Ryegrass; fescue; MADS-box; MADS; MADS-like protein; CENTRORADIALIS; CEN; CEN-like protein; APETALA2; AP2; AP2-like protein; HB; Hb Hb ke protein; plant growth, plant architecture; inflorescence development; flower development; embryo development; seed development; flower organ identity; phase change; male sterility; bybrid seed production; herbage quality; early maturing crop; biomass increase; branching increase; blocking flowering;
                                                                                                                                                                                      (AGRI-)
(AGRE-)
                                                                                                                                   WPI; 2002-452388/48
                                                                                                                                                             Spangenberg G,
                                                                                                                                                                                                                                19-OCT-2000; 2000AU-0000873
                                                                                                                                                                                                                                                        17-OCT-2001; 2001WO-AU01311
                                                                                                                                                                                                                                                                                                              WO200233091-A1
                                                                                                                                                                                                                                                                                                                                                                  biomass increase;
allergenic pollen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel floral meristem identity gene LpCENa contig #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABK82092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABK82092
                                                                                                                                                                                                                                                                                                                                        Lolium perenne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   તે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGAACTTCTCCAATGACACGACCAACAATAAGAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCCAGTTGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGGATTCCAATGTTGGGCTTTGGGCTCTCATAGCTCATGACCTCCCCCCAAATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCCTGAACCTCTACTCTTGGTTTAGATACAACTGCTGATGGGTAGAGCTCATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACTTGGTCCTGGCACATCTGGGTCCGCCATAACCAATGTGAATAAGGATCGCAAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCTGTTGTCCCAGGTATATTACTGACAATCCAGTGAAGATGCTCCCGCAGATACGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAAGGAAGGCACAGATACAGTCTGCCTTCGCTTCTGCAGGAGCACAAAATGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAAGACCAGCTTGTTTGAGTTATAGGTTGCTACCATCTTCACACATGGGTTAAATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAGTCACC --- TCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGAT
                                                                                                                                                                                       AGRIC VICTORIA SERVICES PTY LTD AGRESEARCH LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                             Sawbridge
                                                                                                                                                                                                                                                                                                                                                                    floral meristem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       792
                                                                                                                                                              ŢI,
                                                                                                                                                             ong
                                                                                                                                                              EK,
                                                                                                                                                                                                                                                                                                                                                                  identity protein;
                                                                                                                                                             Emmerling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            386
```

```
CC gene activities may alter flower, embryo and seed development, e.g.,
CC enhance or inhibit embryo differentiation and growth or alter flower
CC organ identity through conversion of one floral organ in another.
CC Manipulation of CEN or HB activity in plants alters the control of phase
CC Manipulation of AP2 activity in plants alters flower organ identity
CC through conversion of one floral organ in another, leads to a change in
CC the number of floral organs and flowering architecture. Manipulation of
CC though conversion of one floral organ in another, leads to a change in
CC though conversion of one floral organ in another. Heads to a change in
CC inducing male sterility for hybrid seed production; changing flower
CC architecture for enhancing value of ornamentals; delaying flowering in
CC forage grasses thus stopping the formation of less digestible stems and
CC increasing herbage quality; altering flowering time allowing early
CC maturing crops; delaying vegetative phase to increase biomass production;
CC increasing branching to enhanced business in fruit trees; altering plant
CC size e.g. shorter plant stature; and in blocking flowering and reducing
CC release for allergenic pollen. This sequence represents a concig
CC development and a potential target for manipulating plant life cycles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Sin
Matches 312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vector (IV) comprising (II), is useful for modifying plant life cycles and/or growth phases, flowering processes, flowering and/or plant architecture and/or flower and/or inflorescence development in a plant, which involves introducing (II), (III) or (IV) into the plant. The individual or simultaneous enhancement or downregulation of MADS-box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) and HB-like proteins, or their functionally active fragments or variants. Nucleic acid (II) encoding (I), a construct (III) comprising (II), or a vector (IV) comprising (II), is useful for modifying plant life cycles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 792 BP; 196 A; 181 C; 182 G; 231 T; 2 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         385 CATCTGTTGTCCCAGGTATATTACTGACAATCCAGTGAAGATGCTCCCGCAGATACGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             320 CGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260 AAGCCATCTAAAGTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTG
CGAGAACTTCTCCAATGACACGACCAACAATAAGAGGCTC
                                                                           CAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTC 776
                                                                                                                                              TGAAGACCAGCTTGTTTGAGTTATAGGTTGCTACCATCTTCACACATGGGTTAAATGGAT
                                                                                                                                                                                                                     TAGTCACC - - - TCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGAT
                                                                                                                                                                                                                                                                                                    CCCCCTGAACCTCTACTCTTGGTTTAGATACAACTGCTGATGGGTAGAGCTCATGACCAT
                                                                                                                                                                                                                                                                                                                                                        CTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACTTGGTCCTGGCACATCTGGGTCCGCCATAACCAATGTGAATAAGGATCGCAAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCAGTTGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGGATTCCAATGTTGGGCTTTGGGCTCTCATAGCTCATGACCTCCCCCCAAATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAAGGAAGGCACAGATACAGTCTGCCTTCGCTTCTGCTTGAAGAGCACAAAAATGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCACCCTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAAACACGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCCACAGGGAGGCCAAGATCATTATCCACAGCAAACTGGCGGGTGTTGAAATGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 176; DB 24;
Pred. No. 1.4e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches 205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              446
                                                                                                                                                                                                                                                                                                 206
                                                                                                                                                                                                                                                                                                                                                                                679
                                                                                                                                                                                                                                                                                                                                                                                                                                                           266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.
```

밁

Qy

밁 ρ 밁 Ş В Š

```
CEN: CEN-like protein; APETALA2; AP2: AP2-like protein; HB; HOmeo-box protein; H1-like protein; plant growth; plant architecture; inflorescence development; flower development; embryo development; seed development; flower organ identity; phase change; male sterility hybrid seed production; herbage quality; early maturing crop; biomass increase; branching increase; blocking flowering; allergenic pollen; floral meristem identity protein; gene; ss.
                                                                                                                                                                                                                                                                                                                       2000AU-0000873
                                                                                                                                                                                                                                                                                                                                    2001WO-AU01311
                                                                                                                                                                                                                                                                                                                                                                                                                                                       novel floral meristem identity protein LpCen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                          MADS-box; MADS; MADS-like protein; CENTRORADIALIS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВP
```

sterility

New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass or fescue species, useful for controlling plant life cycles and/or growth

AGRIC VICTORIA SERVICES PTY LTD AGRESEARCH LTD.

Sawbridge TI,

ong EK,

Emmerling

×

Claim 4; Fig 49; 290pp; English

CC (I) from a ryegrass (Lolium sp.) or fescue (Festuca sp.) species, such as CC MADS-box (MADS) and MADS-like proteins, CENYRORADIALIS (CEN) and CEN-like proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) CC and HB-like proteins, or their functionally active fragments or variants. CC Nucleic acid (II) encoding (I), a construct (III) comprising (II), or a construct (III) comprising (III), or a construct (III) comprising and/or plant. The construct (III) comprision of plant. The conditional core simultaneous enhancement or downregulation of MADS-box (CC gene activities may alter flower, embryo and seed development, e.g., companies and the control of phase core identity through conversion of one floral organ in another.

CC Manipulation of CEN or HB activity in plants alters the control of phase control of AP2 activity in plants alters flower organ identity through conversion of leaves made before flowering activity in plants alters flower organ identity through conversion of one floral organ in another. Leads to a change in the number of floral organs and flowering architecture. Manipulation of control organs and flowering architecture. Manipulation of control organs and flowering architecture. Manipulation of control organs and flowering architecture. flowering plant architecture has a wide range of applications such as: inducing male sterility for hybrid seed production; changing flower architecture for enhancing value of ornamentals; delaying flowering in forage grasses thus stopping the formation of less digestible stems and increasing herbage quality; altering flowering time allowing early maturing crops; delaying vegetative phase to increase biomass production increasing branching to enhanced business in fruit trees; altering plant size e.g. shorter plant stature; and in blocking flowering and reducing release for allergenic pollen. This sequence encodes a novel floral meristem identity protein involved in floral development and a potential invention describes a substantially purified or isolated polypeptide manipulating plant cycles production plant

밁 Š В ğ В õ В õ Вb ρy

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                        Ryegrass; fescue; MADS-box; MADS; MADS-like protein; CENTRORADIALIS; CEN, CEN-like protein; APETALA2; AP2, AP2-like protein; HB; HDmeo-box protein; HB-like protein; plant growth; plant architecture; inflorescence development; flower development; embryo development; seed development; flower organ identity; phase change; male sterility; hybrid seed production; herbage quality; early maturing crop; blommass increase; branching increase; blocking flowering;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
           19-OCT-2000; 2000AU-0000873
                                    17-OCT-2001; 2001WO-AU01311
                                                                25-APR-2002
                                                                                         WO200233091-A1
                                                                                                                    Lolium perenne
                                                                                                                                              allergenic
                                                                                                                                                                                                                                                                  Novel floral meristem identity gene LpCENa contig #3
                                                                                                                                                                                                                                                                                                 27-AUG-2002
                                                                                                                                                                                                                                                                                                                            ABK82094;
                                                                                                                                                                                                                                                                                                                                                    ABK82094 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                        192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        672
                                                                                                                                                                                                                                                                                                                                                                                                                                                 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260 AAGCCATCTAAAGTCTTCCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTG 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAAGGAAGGCACAGATACAGTCTGCCTTCGCTTCTGCTTGAAGAGCACAAAAATGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCCACAGGGAGGCCAAGATCATTATCCACAGCAAACTGGCGGGTGTTGAAATGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGAACTTCTCCAATGACACGACCAACAATAAGAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCCTGAACCTCTACTCTTGGTTTAGATACAACTGCTGATGGGTAGAGCTCATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACTTGGTCCTGGCACATCTGGGTCCGCCATAACCAATGTGAATAAGGATCGCAAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCTGTTGTCCCAGGTATATTACTGACAATCCAGTGAAGATGCTCCCGCAGATACGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGTTGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAAGACCAGCTTGTTTGAGTTATAGGTTGCTACCATCTTCACACATGGGTTAAATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAGTCACC---TCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGAT 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGGATTCCAATGTTGGGCTTTGGGCTCTCATAGCTCATGACCTCCCCCCCAAATGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCACCCTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAAACACGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1225
                                                                                                                                             pollen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 388
                                                                                                                                              floral meristem
                                                                                                                                                                                                                                                                                              entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 176; DB; Pred. No. 1.6e; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              258 G; 330 T; 0
                                                                                                                                           identity protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .6e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         205;
                                                                                                                                                                                                                                                                                                                                                                                                                                              776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1225;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
```

```
(AGRI-) AGRIC VICTORIA SERVICES PTY (AGRE-) AGRESEARCH LTD.
                                                                          Sawbridge
                                                                          TI,
                                                                          Ong EK,
                                                                                LTD
                                                                          Emmerling
```

New substantially purified or isolated polypeptide e.g., MADS-box, CENTRORADIALIS, APETALA2, Homeo-box proteins, isolated from ryegrass fescue species, useful for controlling plant life cycles and/or grown phases. egrass or growth

Claim 3; Fig 32; 290pp;

CC Nucleic acid (II) encoding (II), a useful for modifying plant life cycles cand/or growth phases, flowering processes, flowering and/or plant countries and/or growth phases, flowering processes, flowering and/or plant countries may alter flower and/or inflorescence development in a plant, countries may alter flower, embryo and seed development. Phe countries may alter flower, embryo and seed development, e.g., ce enhance or inhibit embryo differentiation and growth or alter flower corgan identity through conversion of one floral organ in another. CC Manipulation of CEN or HB activity in plants alters the control of phase change, flowering time and the number of leaves made before flowering. CC Manipulation of AP2 activity in plants alters the control of phase change, flowering time and the number of leaves made before flowering. CC Manipulation of fone floral organ in another, leads to a change in the number of flowering architecture. Manipulation of CEN or one floral organ in another, leads to a change in CC flowering plant architecture has a wide range of applications such as: inducing male sterility for hybrid seed production; changing flower in forage grasses thus stopping the formation of less digastible stems and confidence in the plants atture; alterning time allowing early company and production; changing early alterning flowering time allowing early concerned the novel floral meristem identity protein involved in floral confidence of application and a notetatial hardet for manipulation allaring flowering contents and a notetatial hardet for manipulation of later for manipulation contents and contents and contents and contents and contents and The invention describes a substantially purified or isolated polypeptide (I) from a ryegrass (Lolium Sp.) or fescue (Festuca Sp.) species, such as MADS-box (MADS) and MADS-like proteins, CENTRORADIALIS (CEN) and CEN-like proteins, APETALA2 (AP2) and AP2-like proteins, Homeo-box proteins (HB) and HB-like proteins, or their functionally active fragments or variants. development and a potential target for manipulating plant life cycles.

Sequence 787 BP; 194 A; 180 C; 179 G; 228 T; 6 other;

밁 Q 밁 Ş 밁 Ş Query Match Best Local Matches 565 320 CGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGC 505 380 260 AAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTG 319 Local Similarity hes 311; Conserv TGAAGGAAGGCACAGATACAGTCTGCCTTCGCTTNTGCTTGAAGAGCACAAAAAATGAACC GCCACCCTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACAC 439 CAGCCACAGGGAGGCCAAGATCATTATCCACAGCAAACTGGCGGGTGTTGAAATGATCCC Conservative 20.4%; 0; Score 175; DB 24; Pred. No. 2.4e-31; 0; Mismatches 206; Length Indels ω .. Gaps 446 506 379 ۲

S 멍 Q 밁 δÃ

560

TGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTT 619 CATCTGTTGTCCCAGGTATATTACTGACAATCCAGTGAAGATGCTCCCGCAGATACGGAT TTCCAGTTGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGT

GATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTG

499

559 386

TGTGGATTCCAATGTTGGGCTTTGGGCTCTCATAGCTCATGACCTCCCCCCCAAATGAAG

```
RESULT 15
AAC90668/c
ID AAC906
XX AAC906
XX Strawb
XX Strawb
XX Strawb
XX Fragar
XX Fragar
XX WO2000
XX Fragar
XX Graway
XX Gr
      밁
                                                     Qy
                                                                                                                멍
                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 292; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                            The present invention provides the nucleic acid and protein sequences of a number of proteins from the strawberry which are involved in the regulation of flowering. These were identified using primers based on the homologous sequences from A. thaliana, B. napus and R. sativus. They can be used in the production of transgenic field crops whose flowering is regulated and the time of fruiting and harvesting can be manipulated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Strawberry; flowering regulation; harvesting; fruit production; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel nucleic acid involved in controlling plant flowering processes useful for generating transgenic plants, in particular strawberry plants having altered flowering behavior such as early, delayed or day-neutral flowering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200071722-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strawberry flowering regulation protein coding sequence SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC90668 standard; cDNA; 519
                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 23; Page 94-95; 97pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; AAB50271.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-025165/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oeller P, Gutterson N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DNAP ) DNA PLANT TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAY-1999; 99US-0318789.
24-MAY-2000; 2000US-0318789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAY-2000; 2000WO-US14297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fragaria vesca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAC90668;
                               337 AGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCGCCACCCTGGTGCATAC 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455
                                                                                                                   515 CGTCTTCTTGCTGCCGTTTCTCTCTGTGCATTGAAGTAAACGGCAGCAACAGGAACACCA 456
                                                                                                                                               277 CTTCCTCCGCAGCCACTCTCCCTCTGACAAATTGTAGAAAACTGCGGCCACGGGAAGGCCG 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           737 CAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTC 776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       205 TGAAGACCAGCTTGTTTGAGTTATAGGTTGCTACCATCTTCACACATGGGTTAAATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               680 TAGTCACC---TCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGAT 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    265
AGGTCGTTTTCGGCTGCGAAGGTTCGGGTGTTGAAGTGATCCCTTGAGGAAGGCGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCCTGAACCTCTACTCTTGGTTTAGATACAACTGCTGATGGGTAGAGCTCATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTTGGTCCTGGCACATCTGGGTCCGCCATAACCAATGTGAATAAGGATCGCAAGTCAC
                                                                                                                                                                                                                                                                                                                                                              519 BP; 143 A; 132 C; 120 G; 124 T; 0 other;
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                         18.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            regulation;
                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                       Score 161.2; DB 22;
Pred. No. 3.6e-28;
0; Mismatches 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            floral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     homeotic gene;
                                                                                                                                                                                                                                                                                               DB 22; Length 519;
                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            field
                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     crop;
                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         679
396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43
                                                                                                                                                                                                                                          0
```

Search completed: May Job time: 286.5 secs

2, 2003, 10:45:34

```
밁
                         õ
                                                         밁
                                                                                  Ş
                                                                                                                    뫄
                                                                                                                                               Qy
                                                                                                                                                                                밁
                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                     155
                                                                                                                                                  637
                                                                                                                                                                                                             577
                                                                                                                                                                                                                                                                         517
                                                                                                                                                                                                                                                                                                        335
                                                                                                                                                                                                                                                                                                                                    457
                                                                                                                                                                                                                                                                                                                                                                    395
                                                                                       697
                                                                                                                                                                                  215
                                                                                                                                                                                                                                             275
                                                                                                                                                                                                                                                                                                                                                                                               397
35
                                                       ATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACA 576
                                                                                                                                                                                                TCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACT 636
CTTCCAACAGCTAGAGGTTCCGACATTCTT 6
                           CTGCTTACTATAAGAGGGTCTCTTATATTT 786
                                                                                                                     CTAGGTTTGGCGGTGACTGCAGAAGGGAAGAGCTCATGTCCATTGCAGACGAGCTTGCTG
                                                                                                                                                  CTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGG
                                                                                                                                                                                                                                                                                                        GGCCTTGGCATCTCGTAGCTCACCACTTCTTCCCAAATGTAGCATCTGTGGTGCCCAGGA
                                                                                                                                                                                                                                                                                                                                    GGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGGG
                                                                                                                                                                                                                                                                                                                                                                  ACCGACTGCCTTCGTTTTTGCATGAAGAGAACAAACACAAACCTGTGGATGCCTATGTTT 336
                                                                                                                                                                                                                                                                                                                                                                                    ACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATTTCCTGCAGTG
                                                                                                                                                                               TCTGGGTCTGTCATTACCAGAGTGAAGAATGATCTCATGTCGCCTCCTTGAATCTCAACT
                                                                                                                                                                                                                                           ATGTCTGTCACAATCCAGTGCAGGTGCTCTTTCAAATAAGGATCACTAGGGCCAGGAACA
                                                                                                                                                                                                                                                                                                                                    516
                                                                                                                    96
                                                                                                                                                                                156
                                                                                                                                                                                                                                           216
                                                                                                                                                                                                                                                                                                        276
```

•									
•									
a'				•					
								•	
	•								
									•
		•							
				_					
·				·					
						•			
				•					
								•	
·		•			· ·				
	•								
			•						
•									
					•		•		
	•								•
•				•					
·				4					
				•					
•									
		•							
		•							
		•							•

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        May 2, 2003, 05:54:34; Search time 1783.5 Seconds (without alignments) 7773.107 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16154066 segs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-845-849-3
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ctcgagtttttttttttttt.....ggggatccactagttctaga 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.5 Copyright (c) 1993 - 2003 Compugen Ltd.
em_gss_mus:*
em_gss_other:*
em_gss_pro:*
em_gss_rod:*
                                                                                                                                                                                                                                                                                  gb_est1:*
                                                                                                                                                                                                                                                                                                    em_estro:*
em_htc:*
                                                                                                                                                                                                                                                                                                                                                               em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                               em_esthum: *
em_estin: *
                                                                                                                                                                                                                                                                                                                                                                                                            em_estba:*
                                                             em_estom:*
gb_gss:*
em_gss_inv:*
em_gss_inv:*
em_gss_pin:*
em_gss_fun:*
em_gss_fun:*
                                                                                                                                                                                                                                                                                                                                   em_estpl:*
                                                                                                                                                                                                                                                                                                                                                   em_estov:*
                                                                                                                                                                                                                                                     gb_est2:*
gb_htc:*
                                                                                                                                                                                                                      gb_est4:*
                                                                                                                                                                                          em_estfun:*
                                                                                                                                                                                                       gb_est5:*
                                                                                                                                                                                                                                        gb_est3:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32308132
```

0000

0 0 0

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	ი			Result No.
6 5	4ω	Ν	_	
231.6 206	423 234	494	516.4	
27.1 24.1	49.4 27.3	57.7		% Query Match Length DB
659 206	423 551	494	. 518	ength
14 10	10 10	10	10	B
BQ797327 AV560420	AV788551 BE590867	AV562377	AV563203	ID
BQ797327 EST 6265 AV560420 AV560420		AV562377 AV562377	AV563203 AV563203	Description

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7
	101.4	101.6	102.8	103.2	105	113.2	113.8	114.2	115.6	116.2	122.6	122.6	127.2	127.6	131.2	132.6	136.8	139	139.4	140.8	141	142.2	143	146.8	150.8	151.2	N	V)	•	\sim	$\mathbf{-}$	(J)	73	\mathbf{L}	84	196.8	98	99
11.8		<u>-</u>		۲	Ņ	ω.	ω.	ω	ω	ω		4		٠.		5	<u>ه</u>	6.2	σ.	ი	σ.	σ.	9	7.	7.	7.	7.	7.	8	ъ •	9.	9.	0	۳.	۳.	ω	ω.	ω.
627	522	341	586	808	3 3 3	682	357	417	337	463	687	391	558	543	478	383	545	_	. n	432	459	773	574	520	395	528	574	572	476	597	671	498	718	781	542	491	505	1168
17	10	13	13	12	10	13	13	12	13	10	13	14	13	10	10	10	13	10	13	10	9	17	12	10	17	14	13	13	14	13	13	13	13	12	10	12	10	11
AQ289409	8199	75081	M26983	G46385	E50087	158	I94160	7313	175137	0714	7901	65	70	9	9	65	20	AW684982	76	E31922	9	H54286	8	E60296	5807	\sim	5627	6132	1886	1566	4855	5378	0729	4725	3745	5	E49830	Y11154
8	PC22E11	Ta01_02c	sak20h06	EM1_51_F	WHE0991-		sc77g01.	WHE0922	_	sk10c07	SWS1055)17 Lamb	BI426705 sag07c12.	LG1_267_	AW684071 NF011G04N	945014B0	вJ212200 вJ212200	NF023H07	BI478762 949070A05	319228 NF015E08	1tBC26D07	BOGJN29T	HVSMEf00	HVSME	BOGFM69T	BM814255 EST592348	ВJ45627	вJ46132	EST6262	вJ31566	вJ44855	BJ45378	EST5816	EST50886	AV93745	WHE2314	WHE0963_	Zea ma

0.00000

0 0 0 0 0 0 0 0 0 0

ALIGNMENTS

FEATURES SOUTCE	COMMENT C		AUTHORS F			SOURCE t	DS	ACCESSION F	LOCUS P	RESULT 1
The First Laboratory for Plant Gene Research Kazusa DNA Research Institute Yana 1532-3, Kisarazu, Chiba 292-0812, Japan Email: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/. Location/Qualifiers 1. 518 /organism="Arabidopsis thaliana" /strain="Columbia"	20363093 Contact: Erika Asamizu	of 12,028 non-redundant expressed sequence tags from normalized and size-selected cDNA libraries DNA Res. 7, 175-180 (2000)	Asamizu, E., Nakamura, Y., Sato, S. and Tabata, S. A large scale analysis of cDNA in Arabidopsis thaliana: Generation	Osidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis. (bases 1 to 518)	Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;	thale cress. Arabidopsis thaliana	EST.	AV563203 .1 GT:8734629	AV563203 Arabidopsis thaliana green siliques Columbia Arabidopsis thaliana green siliques Columbia Arabidopsis thaliana green siliques Columbia Arabidopsis	

```
JOURNAL
MEDLINE
COMMENT
                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                RESULT 2
AV562377
                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΩÝ
                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                       FOCUS
                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                  448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                    508
                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                              388
                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                            328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGATGCATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATAGGCATCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAAAACACTCTCATTTTCCTCCCCCTCTCATTTTTATTACACACTTATATATATTGAACTAC 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAATATAACACTTCATTTCATGTAGATTAATATATTATCGCATCACACACTATATAAG
                                                                                                                                                                                                                                                                                                                                                                                       GGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATAGGCATCATCACCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAAAACACTCTCATTTTCCTCCCCCCTCTCATTTTATTACACACTTATATATTGAACTAC
                                   DNA Res.
20363093
                                                                                                                                                                                                  AV562377
AV562377
thaliana
AV562377
                                                                                                              Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
            Contact: Erika Asamizu
The First Laboratory fo
                                             A large scale analysis of cDNA in Arabidopsis th
of 12,028 non-redundant expressed sequence tags
size-selected cDNA libraries
DNA Res. 7, 175-180 (2000)
                                                                                           1 (bases 1 to 494)
Asamizu, E., Nakamura, Y.,
                                                                                                                                                    Arabidopsis thaliana
                                                                                                                                                                           AV562377.1
EST.
                                                                                                                                                                thale cress.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                           Arabidopsis thaliana cDNA clone SQ169b07F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:3702"
/clone="SQ183801F"
/clone_lib="Arabidopsis thaliana green
/tissue_type="green slliques"
/note="Vector: pBluescriptII SK-; Site_
 Laboratory
Research
                                                                                                                                                                                        GI:8733803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60.3%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ဂ
y for Plant
Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 516.4; DB 1
Pred. No. 1.9e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                          Sato, S. and Tabata, S.

f cDNA in Arabidopsis thaliana: Generation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                   494 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                           bp mRNA linea
green siliques Col
3', mRNA sequence.
            Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150
             Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Site_1:
                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                       inear EST 07-SEP-2000
Columbia Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          siliques
                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            518;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ECORI;
                                                                     normalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Site_2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                             447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                507
                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                           387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87
                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                 RESULT 3
AV788551
LOCUS
                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ОÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                   KEYWORDS
                                                                                                                                 VERSION
                                                                                                                                          ACCESSION
                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                       449
                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                       509
                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                          329
                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            209
                                                                                                                                                                                                                                                                                                                                                                         389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAATATAACACTTCATTTCATGTAGATTAATATATATTATCGCATCACACACTATATAAGT 88
                                                                                                                                                                                                                                                                                               CTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTG
                                                                                                                                                                                                                                                                                                                                                                                               GTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAGCAGGGATATCA 494
                                                                                                                                                                                                                                                                      TAGCAGGGATATCA 522
                                                                                                                                                                                                                                                                                                                                                              GTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAAACACGACACGATGAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGATGCATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAGGCATCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAATTAAAATACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAGGCATCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAAATTAAAATACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAACACTCTCATTTTCCTCCCCCCTCTCATTTTTATTACACACTTATATATTGAACTACT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAACACTCTCATTTTCCTCCCCCCTCTCATTTTTATTACACACACTTATATATATTGAACTACT 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATGCATAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCATCT
 1 (bases 1 to 423)
Seki,M., Narusaka,M., Ishida,J., I
Oono,Y., Sakurai,T., Carninci,P.,
Arakawa,T., Shibata,K., Shinagawa,
                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                   EST
                                                                                                                                            mRNA sequence.
AV788551
                                                                                                                                                                  AV788551 AFL6 Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yana 1532-3, Kisarazu, Chiba
Email: asamizu@kazusa.or.jp,
Location/Qualifiers
                                                                                        Arabidopsis thaliana
                                                                                                       thale cress.
                                                                                                                                AV788551.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57.7%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Arabidopsis thaliana g
/tissue_type="green siliques"
/note="Vector: pBluescriptII SK-;
xho1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Arabidopsis
/strain="Columbia"
/db_xref="taxon:3702"
/clone="SQ169b07F"
                                                                                                                                GI:19807341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
Ishida, J., Kamiya, A., Sato
Carninci, P., Kawai, J., Itoh
.., Shinagawa, A., Muramatsu,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 494; DB 10;
Pred. No. 1.4e-75;
D; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                     thaliana cDNA clone
                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             292-0812, Japan URL:http://www.kazusa.or.jp/en/plant/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        green
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Site_1: EcoRI; Site_2:
              Itoh, M.,
                           Satou, M.,
                                                                                                                                                                     RAFL06-80-B19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        siliques
                                                                                                                                                                                  EST 28-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                           Nakajima, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Columbia"
                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                              420.
                                                                                                                                                                                                                                                                                                                                                                                                                           388
                                                                                                                                                                                                                                                                                                                                                                         448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                         508
                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                      w
'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

Hayashizaki, Y

of the wheat

Han

Pooideae

MOT

```
RESULT 4
BE590867/c
                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                      DEFINITION
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              173 TCGTATCATAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTA
                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                    353 CAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGGTGCATACACTGTTTGCCCTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293 TCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233 TGCAATATCAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCCCAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                  GCTGTCGAAACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGT
                                                                                                                                                                                                                                                  AAC 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGTATCATAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTA
                                                                                                                                                                                                                                                                                               GCTGTCGAAACAATATAAACACGACGACGATGAATTCCTGCAGTGGGACTTGGATTTTCGT
                                                                                                                                                                                                                                                                                                                                                                                           TGCAATATCAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423;
         aestivum
BE590867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: mseki@rtc.riken.go.jp
An Arabidopsis full-length cDNA library was constructed essentially as reported previously (seki et al., 1998). This clone is in a modified pBluescript vector as a SstI/XhoI insert. Please visit our web site (http://www.gsc.riken.go.jp/e/plant/index _e.html) for
                           BE590867 551 bp
WHE0855_C01_E01ZS Wheat 20-45 DA
aestivum cDNA clone WHE0855_C01_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIKEN Genomic Sciences Center 3-1-1 Koyadai, Tsukuba, Ibaraki 305-0074, Tel: 81-298-36-4359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Motoaki Seki
Plant Functional Genomics Research Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 81-298-36-9060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Large scale analysis of Arabidopsis full-length cDNA (2002b)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shinozaki, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Site_1: SstI; Site_2: dehydration (1, 2, 5, 10, 24 hr) treatments"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="plants at various germination to mature seeds" /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Arabidopsis
/db_xref="taxon:3702"
/clone="RAFL06-80-B19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="RAFL6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49.48;
                           WHE0855_C01_E01, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 423; DB 10;
Pred. No. 2.4e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                 op mRNA linear EST 18-AU
DAP spike cDNA library Triticum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thaliana'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               xhoi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           developmental stages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I; subjected
and cold (1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ū
                                                                                                                                                                                                                                                                                                                                              472
                                                                                                                                                                                                                                                                                                                                                                                                                                          412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 172
                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                           Ş
                                                                          밁
                                                                                                                  δÃ
                                                                                                                                                                       밁
                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
614 GGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCA
                                                                                                                                                                         370
                                                                                                                                                                                                                    494
                                                                                                                                                                                                                                                                      430
                                                                                                                                                                                                                                                                                                                  434
                                                                                                                                                                                                                                                                                                                                                                  490
                                                                                                                                                                                                                                                                                                                                                                                                                 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          314 AAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                               TGGGATCGCTTGGACTTGGAGCATCTGGGTCTACCATCACGAGTGTGTAGAAGGTCCTCA
                                                                                                                                                                                                TCTGGCGCCACCCTGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACA 433
                                                                                                                       GAGGGTTGCTAGGACCTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGA
                                                                                                                                                                                                                                                                   CGAAGCGATGGATCCCCATGGTCGGACGAGGGCTCTCGTAGCACATCACCTCCTGCCCGA
                                                                                                                                                                                                                                                                                                                                                                  TCTGGCGCCACCCGGGAGCGTACACGGTCTGCCGGCCGAGCTGCTGGAAGAGCACGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGACGGCGGCGACAGGCGGGCCGAGGTTGTAGAGCTCGGCGAAGTCCCTGGTGTTGAAGT 491
                                                                                                                                                                       AGGATGCACCAGTTGTACCGGGGATATCTGTCACAAGCCAGTGGAGATACTCCCTAAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 551)
1 (bases 1 to 551)
Anderson,O.D., Chao,S., Choi,D.W., Close,T.J., Fenton,R.D., He provided the provided that the provided that the provided to the provided that the provi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: oandersnepw.usda.gov
Email: oandersnepw.usda.gov
Sequence have been trimmed to remove vector sequence and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Olin Anderson
US Department of Agriculture, Agriculture Research
West Area, Western Regional Research Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         quality sequence with phred score less Seq primer: Stratagene SK primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: 5105595773
Fax: 5105595818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Trache Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       800 Buchanan Street, Albany,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bread wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE590867.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="Vector: Lambda Uni-ZAP XR, excised phagemid; Site_1: EcoRI; Site_2: XhoI; Plants were grown in the greenhouse. Spikes at 20 DAP and seeds at 30 to 45 DAP were harvested, total RNA and poly(A) RNA were prepared, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside. Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="WHE0855_C01_E01"
/clone=lib="Wheat 20-45 DAP spike cDNA library"
/tissue_type="Spike and seed"
/dev_stage="Adult plant"
/lab_host="E. coli SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="Uninese Spring"
/db_xref="taxon:4565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                r: Stratagene SK primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:9845940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 234; DB 10;
Pred. No. 6.2e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CA 94710,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
```

0

Gaps

0;

673

613

251

553 371

```
Š
                                                                                                            δ
                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
BQ797327
LOCUS
    S
                               ₽
                                                                                       밁
                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
       448
                                                                                          330
                                                                                                                  328
                                                                                                                                               270
                                                                                                                                                           268 TAAAGTCTTCCTCCGCAGCCACTCTCCTGACAATTGTAGAAAACTGCGGCCACG 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                                                  Local
  CCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTT
                                              GGAAGGCCGAGATTGTAGATCTCAGCAAACTCCGCGAGTGTTGAAGTTCTGGCGCCACCCT 387
                              GGTGCATACACTGTCTGCCTACCCAGTTGGCGAAACAATACAAAAACAAAGCGATGAATC
                                                                                     GGCAAACCAAGATTATAAAGCTCAGCAAAGTCCCTAGTGTTGAAATTTTGGCGCCACCCT 389
                                                                                                                                           TATGATCTTCGACCACCCGAGCCGCCCTCCCTTTGGCAGTTAAAATAAACAGCAGCAACA 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGGTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTCCAGCACGTCCCCCACAACCCTGCCAACCACCAGCGGGTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCGTTGGACACGGTCCTGTTCCCGAAGGTCACCCTGAGGTTGGTGGTCCGGATGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCATTGCCGCCCACCTCAACCCTGGGCTGCTGGGCGACCATGGACGGCTTGAGCTCGC
                                                                                                                                                                                                     291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abbal, P., Agasse, A., Ageorges, A., Atanassova, R., Barrieu, F., Couture, C., Dedaldechamp, F., Delrot, S., Glissant, D., Grimple Hamdl, S., Romieu, C. and Terrier, N.

Generation of Expressed Sequence Tag from Grape Berry (skin, or seeds) at Various Developmental Stages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unite de Recherche des Produits de la Vigne Institut National de la Recherche Agronomique 2, place Viala, 34 060 Montpellier Cedex 01, 1 Tel: 00-33-(0)4-99-61-28-62 Fax: 00-33-(0)4-99-61-28-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 6265 Ripening Grape berries | vinifera cDNA clone RT071D11 3', BQ797327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vitis vinifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ797327
BQ797327.1 GI:22012293
                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: romieu@ensam.inra.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Romieu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vitaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 659)
                                                                                                                                                                                                                                                                         197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  primer:
                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                            /clone_lib="Ripening Grape berries Lambda Zap II Library" /dev_stage="ripening stage"
/note="Organ: Fruit; Vector: Lambda Zap II; Site_1: Eco Ri; Site_2: KhoI; Oriented library, construction described in Generation of ESTs from grape Berry (skin, pulp or seeds) at various developmental stages by Terrier, N., Ageorges, A., Abbal, P., Romieu, C. in J. Plant Physiol. 158
                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:29760"
/clone="RT071D11"
                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Vitis vinifera"
                                                                                                                                                                                                                                                                                                                                                                                                                            cultivar-"Shiraz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vitis
                                                                                                                                                                                                                 27.1%;
74.6%;
                                                                                                                                                                                                                                                                                       1575-83
                                                                                                                                                                                                                                                                         O
                                                                                                                                                                                                     0;
                                                                                                                                                                                               Score 231.6; DB 14;
Pred. No. 1.5e-30;
"Hamatches 99;
                                                                                                                                                                                                                                                                        3 2001"
124 g
                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA linear EST 30-
Lambda Zap II Library Vitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence
                                                                                                                                                                                                                              DB 14;
                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         France
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Berry (skin, pulp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 30-JUL-2002
                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Grimplet, J.,
                                                                                                                                                                                                 Gaps
    507
                              449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 191
                                                                                                                                                                                                                                                                                                                                                      Eco RI
                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
AV560420
LOCUS
 밁
                     Q
                                                        밁
                                                                              δ
                                                                                                              밁
                                                                                                                                        Ş
                                                                                                                                                                     Ъ
                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                           Query Match
Best Local
  181
                                                                                                                                           178
                                                                                                                                                                                                  118
                                                        121
                             298
                                                                                    238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450
                                                                                                               61
                                                                                                                                                                       ۲
CTCTGACAATTGTAGAAAACTGCGGC
                                                                                                                                                                                                                            206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AV560420
AV560420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     thaliana
AV560420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AV560420.1
                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                 ۵
```

```
TATCAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCC
                                                                                                  TCATAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAA
  TCATAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAA
                                                                                                                                                           ATCTCAACTCTTGGCTTGTTTTGAACCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTCCACCCTAAGTTGGCTGACTAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTGCTGGAATATCAGTCACCAACCAATGTAAGTACTCCCTTAGGTTCGGATTACTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGA 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l (bases 1 to 206)
Asamizu, E., Nakamura, Y., Sato, S. and Tabata, S.
A large scale analysis of cDNA in Arabidopsis thaliana: Generation of 12,028 non-redundant expressed sequence tags from normalized and Size-selected cDNA libraries
DNA Res. 7, 175-180 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Erika Asamizu
The First Laboratory for Plant Gene
Kazusa DNA Research Institute
Yana 1532-3, Kisarazu, Chiba 292-081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Arabidopsis thaliana
                                                                                                                                                                                                                                       Similarity 100.
06; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    532-3, Kisarazu, Chiba 292-0812, Japan
asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          206 bp mRNA linear EST 07-SEP-20 Arabidopsis thaliana green siliques Columbia Arabidopsis CDNA clone SQ134d05F 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="Arabidopsis thaliana green siliques
/tissue_type="green siliques"
                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:3702"
/clone="SQ134d05F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Arabidopsis
/strain="Columbia"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                            'note="Vector: pBluescriptII SK-;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:8731846
                                                                                                                                                                                                                                                                                                                                       43 c
                                                                                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                       Score 206; DB 10;
Pred. No. 6.4e-26;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         659
                                                                                                                                                                                                                                                                                                                                       99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              thaliana"
                                                                                                                                                                                                                                                                                                                                       c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Research
                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                              Site_1:
                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-SEP-2000
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 Columbia"
                                                                                                                  237
180
                                    297
                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                       0;
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                               B
                                                                                                                                                        δð
                                                                                                                                                                                              В
                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                             БР
 밁
                             δÃ
                                                             DЬ
                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1111549/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                573
                                516
                                                                                                                                                               396
                                                                                                                                                                                              633
                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                693
                                                                                                                                                                                                                                                                                                276
                                                                                                                                                                                                                                                                                                                                                              216
                                                                                                                                                                                                                                                                                                                                                                                               813
 453
                                                                                                                                                                                                                                                                                                                               753
                                                                                                                                                                                                                                                                                                                                                                                                                               156
AATATCCGTCACCAGCCAGTGTAGGTACTCCCTAAGGTTCGGGTCGCTTGGGCTCGGAGC
                  GATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAAC
                                                             CGGCCGAGGGCTCTCGTAGCAGATCACCTCTTGCCCCAAATGCTGCCCCAGTAGTTCCCGG
                                                                                            GGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGG
                                                                                                                             CACCGTCTGCCGCCCCAGCTGCTGGAACAGCACCAGCACGAAGCGGTGGATCCCCATGGT
                                                                                                                                                          CACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAAACACGACACGATGAATTCCTGCAGT 455
                                                                                                                                                                                             NNNNNNGTAGAGCTCGGCGAAGTCCCTGGTGTTGAAGTTCTGGCGCCAGCCCGGGGCGTA
                                                                                                                                                                                                                            GAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCTGGTGCATA 395
                                                                                                                                                                                                                                                            TCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCC
                                                                                                                                                                                                                                                                                                                            TAAATCTCATCAGAGTATGCAATATCAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCT 275
                                                                                                                                                                                                                                                                                                                                                                                             TCATCACCGTTCGTTACTCGTATCATAAAATGGTTATTAAAATTAAAATACTATAGATGCA 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zea mays CL846_1 mRNA sequence. AY111549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Missouri,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (25-APR-2002) Maize Mapping Project, Missouri, Columbia, MO 65211, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coe, E.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hainey, C.F., Dolan, M., Miao, G.H., Vogel, J.M., Whitsitt, M.S Arthur, L.W., Hanafey, M., Morgante, M. and Tingey, S.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clade; Panicoideae; Andropogoneae; Zea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Overgo Probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Maize Mapping Project/DuPont Consensus Sequences for Design of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AY111549.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AY111549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rect Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1168)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="this sequence is part of a project of EST assemblies resulting from the application of public contigs to seed DuPont contigs; this resource was assembled by DuPont as part of a collaboration for tovergo addressing of BACs in conjunction with the Ma Mapping Project"

159 t 336 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Library'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Zea mays"
/db_xref="MaizeDB:632948"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="CL846_1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'clone_lib="Maize Mapping Project/DuPont Cornsensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 199.4; DB 1
Pred. No. 3.8e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                with the Maize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                             694
                                                                                                                                                                                             574
                             575
                                                             454
                                                                                              515
                                                                                                                             514
                                                                                                                                                                                                                                                                                             335
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
BE498304/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
ORIGIN
                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               636 TCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCCGGGTCCACCATCACGAGGGTGTAGAAGGTCCTCATGTCAGGTNNNNNGACCTCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGGGCTGGTGCACCACCATGGACGGCTTGAGCTCGCAGCCGTTGGACACGGTCCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NNNNNNNNNNNGCGGCTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGCTTACTATAAGAGGGTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCGTAGCTGACCCTGAGGTTGGTGGTCCGGACGAAGGGGTCCAGCACGTCGNNNNNNN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2000)
Contact: Olin Anderson
US Department of Agriculture, Agriculture Research
West Area, Western Regional Research Center
800 Buchanan Street, Albany, CA 94710, USA
Tel: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Anderson,O.D., Chao,S., Choi,D.W., Close,T.J., Fenton,R.D., Han,P.S., Hsia,C.C., Kang,Y., Lazo,G.R., Miller,R., Rausch,C.J., Seaton,C.L. and Tong,J.C.
The structure and function of the expressed portion of the wheat genomes - Pre-anthesis spike cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE498304 505 bp mRNA linear EST 04-AUG-20 WHE0963_B10_C19ZS Wheat pre-anthesis spike cDNA library Triticum aestivum cDNA clone WHE0963_B10_C19, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooidea; Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              quality sequence with phred score less than
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 505)
Anderson, O.D., Chao, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE498304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence have been
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: oandersn@pw.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE498304.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                primer: Stratagene SK primer.
Location/Qualifiers
                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5105595818
                                                                               greenhouse. Whole spike with awns trimmed, white, green and yellow anther were collected and total RNA, and poly(A) RNA were prepared, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside, Plasmid DNA
                  preparations and DNA sequencing were performed Anderson lab (all other authors)."
148 c 160 g 98 t
                                                                                                                                                                                                               /note="Vector: Lambda Uni-ZAP XR, excised phage
Site_1: EcoRI; Site_2: XhoI; Plants were grown
                                                                                                                                                                                                                                                                                                                                                                     /cultivar="Chinese Spring'/db_xref="taxon:4565"
                                                                                                                                                                                                                                                            /dev_stage="Adult plant"
/lab_host="E. coli SOLR"
                                                                                                                                                                                                                                                                                                      /clone_lib="Wheat pre-anthesis spike cDNA library"
/tissue_type="Spike before anthesis"
                                                                                                                                                                                                                                                                                                                                                       /clone="WHE0963_B10_C19"
                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    trimmed to remove vector
                                                                                                                                                                                             Whole spike with awns trimmed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        190
                g
                                                                                                                                                                                                                                         excised phagemid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Service, Pacific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 04-AUG-2000
                                                                                                                                                                                                                    in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pooideae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          635
                                                          the
                                                               8
```

Query Match Best Local Similarity

23.2%;

Score 198.4; DB 10; Pred. No. 8.4e-25;

Length 505

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ᄝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF483056/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGACGAAGGGGTCCAGCACGTCCCCCACAACCTGCCAACCAGCAGCGGGTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGAGCTCGCAGCCGTTGGACACGGTCCTGTTCCCGAAGGTCACCCTGAGGTTGGTGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGTCCTCATCTCATTGCCGCCCACCTCAACCCTGGGCTGCTGGGCGACCATGGACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCCTAAGGTTGGGATCGCTTGGACTTGGAGCATCTGGGTCTACCATCACGAGTGTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGCCCGAACGACGCACCAGTTGTACCGGGGATATCTGTCACAAGCCAGTGGAGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTACGAGCACGAAGCGGTGGATCCCCATGGTCGGACGAGGGCTCTCGTAGCACATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2000)
Unpublished (2000)
Contact: Olin Anderson
US Department of Agriculture, Agriculture Research
West Area, Western Regional Research Center
West Area, Western Regional, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280;
                                                                                                                                                                                                                                                                                                                                                                   Email: oandersn@pw.usda.gov
Sequence have been trimmed to remove vector
quality sequence with phred score less than
Seq primer: Stratagene SK primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 491)
Anderson,O.D., Chao,S., Choi,D.W., Close,T.J., Fe, P.S., Hsia,C.C., Kang,Y., Lazo,G.R., Miller,R., Seaton,C.L. and Tong,J.C.
The structure and function of the expressed portion of the expressed portion of the company of the com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BF483056
491 bp mRNA linear EST 06-DEC-2000 WHE2314_C03_E06ZS Wheat pre-anthesis spike cDNA library Triticum aestivum cDNA clone WHE2314_C03_E06, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Spermatophyta; Magnoliophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bread wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Triticeae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Buchanan Street, Albany, : 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5105595818
                                                                                                                                                                                            /cultivar="Chinese Spring"
/db_xref="taxon:4565"
/clone="WHE2314_C03_E06"
                                                                    /clone_lib="Wheat pre-anthesis
/tlssue_type="Spike before antheology of the before antheology of the before antheology of the before antheology of the before the bef
                                                                                                                                                                                                                                                                                                      organism="Triticum aestivum"
                                         note-"Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:11566357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Triticum.
e="Vector: Lambda Uni-ZAP XR,
_1: EcoRI; Site_2: XhoI; Plan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Streptophyta; Embryophyta; Tracheophyta; yta; Liliopsida; Poales; Poaceae; Pooideae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                     anthes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             136;
P XR, excised
Plants were o
                                                                                                                                     spike
hesis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    portion
                                                                                                                                                                       CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fenton, R.D., ., Rausch, C.J
1 phagemid;
grown in the
                                                                                                                                                                    library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Service,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Han
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
AV937451/c
LOCUS
                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGGGTCCAGCACGTCCCCCACAACCCTGCCAACCACCAGCGGGTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST
```

```
Query Match
Best Local Similarity
Matches 276; Conserv
                                                                                                                                                                                                                                                                                                                        ACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCT 779
                                                                                GGTTGGGATCGCTTGGACTTGGAGCATCTGGGTCTACCATCACGAGTGTGTAGAAGGTCC
                                                                                                                                                                                                                                                          . GGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCC
                                                                                                                                                                                                                                                                                                NGAAGGATGCACCAGTTGTACCGGGGATATCTGTCACAAGCCAGTGGAGATACTCCCTAA
                                                                                                                                                                                                                                                                                                                                                                                                                       ACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCAGCCGTTGGACACGGTCCTGTTCCAGAAAGAAACCCTGAGGTTGGTGGTCCGGATGA
                                                                                                                                   TCATCTCATTGCCGCCCACCTCAACCCTGGGCTGCTGGGCGACCATGGACGGCTTGAGCT
                                                                                                                                                                            TGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGAT
                                                                                                                                                                                                                                                                                                                                                                                 GCACGAAGCGATGGATCCCCATGGTCGGACGAGGGCTCTCGTAGCACATCACCTCCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and yellow anther were collected and total RNA, and poly(A) RNA were prepared, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab (Choi, Close, Fenton) at the University of California, Riverside. Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              151 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 196.8; DB Pred. No. 1.6e-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Whole spike with awns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  trimmed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               white,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                       132
                                                                                             730
                                                                                                                                     192
                                                                                                                                                                            670
                                                                                                                                                                                                                    252
                                                                                                                                                                                                                                                          610
                                                                                                                                                                                                                                                                                                   312
                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                                 372
                                                                                                                                                                                                                                                                                                                                                                                                                         490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             green
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Barley EST sequencing project in Unpublished (2002) National Institute of Genetic 1111 Yata, Mishima, Shizuoka Tel: 81-559-81-6856 Fax: 81-559-81-6855 Hordeum vulgare subsp. spontaneum.
Hordeum vulgare subsp. spontaneum
Eukaryota; Viridiplantae; Streptophyta;
Spermatophyta; Magnoliophyta; Liliopsid AV937451 542 bp mRNA
AV937451 K. Sato unpublished cDNA library,
heading stage top three leaves Hordeum vul Center For Genetic Resource Information Contact: Tadasu Shin-i AV937451.1 GI:18233248 cDNA clone Triticeae; Hordeum. (bases 1 to 542) tshini@genes.nig.ac.jp Location/Qualifiers /organism="Hordeum vulgare /strain="H602" bahlin08 5′, Genetics mRNA sequence. 411-8540, Liliopsida; NIG subsp. and vulgare subsp. spontaneum Embryophyta; Tracheophyta; a; Poales; Poaceae; Pooidea Okayama spontaneum" linear EST 18-JA strain H602 adult, Univ 18-JAN-2002 Pooldeae

```
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                               RESULT 11
BG647258/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                             KEYWORDS
                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                    SOCOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                    TITLE
                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                 753
                                                                                                                                                                                                                                                                                                                                                                                                                                          694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            274
                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                        TATT
                                                                                                                                                                                                                                                                                                                                                                                   AACT
                                                                                                                                                                                                                                                                                                                                                                                                           ACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCCACCAATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGGGTTTGGGCTCTCGTATGGCACGATCTCTTTTCCAAAGCTATCGTTTGTTGATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACACCGTCCCCCGCCCCAGCTGCTGCTGCAGAACCATAACCATGCGGTGGATGCCCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAAGGTTGAAGCGGCGCGAAGCTGCGTGAGTTGAAGCTCTGGCGCGCTTGTGGCGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCTGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCTCCCGCCGGTGCCCGTGGGACGCTGGCAGTTGAAGTACACGGCGGCGACGGGCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGCTGGGTTTCAGAGATACTGCTGGTGAGCGAAACTCCATGCCATTGAACACAGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCANCAGGATCCACCATAACTAGAGTATAGGCAACACGAAAATCATCACCACCAATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGACATCAGTCACCATCCAGTGCAGGTACTCCCTCAGGGTTGGGTTGCTGGGATTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACGACGATGAATTCCTGCA 453
                       Hahn, M.G., Ojanen Reuhs, T., Samac, D., 1
Utterback, T., Cho, J. and Fraser, C.M.
ESTs from roots of Medicago truncatula
oligogalacturonides of DP 6-20
Unpublished (2001)
Contact: Michael G. Hahn
                                                                                                                                   Medicago truncatula
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Trifolieae
                                                                                                                                                                                                                                                               BG647258
EST508867 HOGA Medicago
                                                                                                                                                                                                                                        mRNA sequence.
BG647258
University of Georgia
           Complex Carbohydrate Research Center
                                                                                                                                                                                                 barrel medic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                                                                                                                                                                                 756
                                                                                                            (bases 1 to 781)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="bah11n08"
/clone_lib="%: Sato unpublished cDNA library,
adult, heading stage top three leaves"
/tissue_type="top three leaves"
/dev_stage="adult, heading stage"
a 150 c 146 g 124 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:77009"
                                                                                                                                                                                                                            GI:13782360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 184.6;
Pred. No. 1.
                                                                                                                                                                                                                                                                  781 bp
truncatula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .9e-22;
                                                                                                                                                                                                                                                                  mRNA
cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180;
                                                                                              Town, C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                    treated
                                                                                                                                                                                                                                                                    clone
                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                               near EST 2
phoga-1619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    strain
                                                                                                                                                                                                                                                                    24-APR-2001
9 5' end,
                                                                                                                                        Trifolieae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          333
                                                                                                                                                                                                                                                                                                                                                                                                                                        752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
           맑
```

```
BASE COUNT
ORIGIN
δã
                                                               B
                                                                                                                  δÃ
                                                                                                                                                                               밁
                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                              245
                                                                                                                                                                                                                                                                                                                                                                                                                 305 TTAGATAAGGATCACTAGGGCCAGGAACATCAGGGTCTGTCATCACCAGTGTATAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 425 CAAACACAAACCTGTGTATACCTATATTTGGCTTTGGTATCTCATAGCTCACTACTTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       428 TAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACAATCTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       371 AGTTCTGGCGCCACCCTGG----TGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              311 AGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251 TAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCCTCTGACAATTGT
      788 TAGACATCT 796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                               TAAAGGAATCAAGAACTTCTCCTATCACTCTTCCAACAATGAGTGGTTCTTGAGACATTC
                                                                                                                        TAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTA
                                                                                                                                                                                                                TCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCCAAATGTAGCATCTGTTCCAGGAATATCTGTCACAATCCAGTGCAAGTGTTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATAGGTGCTATGGCTATGTAGCTAGCGTCTTCTTGCAGCGGTTTCTCTCTGAGCATTGA
                                                                                                                                                                                  ACTCATGGCCATTGAAGACTTGCTTGTTGTTAACTCACAGTCATTTTCATGCTTGTGG
                                                                                                                                                                                                                                                                                                 ACCTCATGTCACCACCATCAATCTCAACTTTGGGTTTTGGTGTTGATAGTGGAAGGGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTAAACAGCAGCAACAGGGAGACCAAGATCATTCTGTGAAGCAAAATTGCGAGTGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220 Riverbend Road
Tel: 706-542-4457
Fax: 706-542-4412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               available at: www.medicago.org
Seq primer: SKmod (CTA gAA CTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: hahn@ccrc.uga.edu
G390854e TIGR sequence name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Riverbend Road,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="3 day old seedling roots"
/dev_stage="24 hours after treatment in the dark at 26 C
with 0.5 mg/ml oligogalacturonides (DP 6-20) in the
presence of 100 ug/ml Gentamicin"
/lab_host="XLOLR"
/note="Yector: pBluescript SK-; Site_1: EcoRI; Site_2:
/note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2: pBluescript Sk-; Site_1: EcoRI; Site_2:
/note="Vector: pBluescript SK-; Site_1: EcoRI; Site_2: pBluescript Sk-; Site_1: EcoRI; Site_2:
/note="Vector: pBluescript Sk-; Site_1: EcoRI; Site_2: pBluescript Sk-; Site_1: EcoRI; Site_2: pBluescript Sk-; Site_1: pBluescript Sk-; Sit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:3880"
/clone="pHOGA-1619"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="HOGA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cultivar="A17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Medicago truncatula"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21.1%; 59.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Athens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 181; DB 12;
Pred. No. 6.7e-22;
D; Mismatches 220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MTMBW53TK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30602-4712,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ი
(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               More
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                        787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546
                                                               66
                                                                                                                                                                                                                                     727
                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                           667
                                                                                                                                                                                                                                                                                                                                                                                                                 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                486
```

۲;

TIGCCATIT

```
Ş
                                                                                                                                     밁
                           δ
                                                                   멍
                                                                                                                                                                      Š
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                     D
                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM407295/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNT
                                                                                     510 AGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTTGAGGGTTGCTAGGACT
                                                                                                                                     385 GATCACTGGTTTTGGACTATCGTAGCTCACTATCTCTTTTCCAAAAGAAGCATCAGTTGA
                                                                                                                                                                                                          445 TTTCACTGTTTGTCTTCCTATTTTGCCTATATAATACGAACACGTATCGATGAATCCC
                                                                                                                                                                                                                                                                                                                 333 GCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCTGGTGC
                                                                                                                                                                                                                                                                                                                                                   565 TCATCTTCTAGCAGCAGTTTCTCTTTGGGCATTAAAGTAGACAGCAGCAACAGGGGA 506
                                                                                                                                                                                                                                                                                                                                                                                      273 TCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAG 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                               TGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAAT
                                                                 TGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGT
                                                                                                                                                                                                                                                                            ACCCAATCCATTTTCTGCTGCAAATTTTTGAGTGTTGAAATGATCTCTTGTTACTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BM407295
EST581622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           van der Hoeven, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   potato.
Solanum tuberosum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              For clone info: please contact Research Genetics, Division tel 1-800-711-6195, email cdna@resgen.com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cdna@resgen.com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tanksley, S. and Baker, B. Generation of ESTs from potato roots
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Utterback, T., Chiemingo, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota: Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Solanum.

1 (bases 1 to 718)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BM407295.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BM407295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer: T3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1-800-711-6195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             isolated from in vitro grown stem cuttings on CM medium. Roots were isolated two weeks after placing the stem cuttings from in vitro grown plants on medium." 128\ c \qquad 142\ g \qquad 205\ t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Vector: pBluescript SK(-); Site_1: EcoRI; Site_2: XhoI; supplier: Cornell University, Tanksley lab; sequencing; The Institute for Genomic Research. Roots we:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="potato roots"
/tissue_type="roots"
/dev_stagey="in vitro grown stem cuttings"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cultivar="Kennebec"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="cPRO30M16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:4113"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ∕organism="Solanum tuberosum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     potato roots Solanum tuberosum cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:18258925
                                                                                                                                                                                                                                                                                                                                                                                                                                         20.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics, Libraries Division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sun, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 173.2; DB 1
Pred. No. 1.5e-20;
0; Mismatches 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Karamycheva,S.A., Tsai,J.,
, Bougri,O., Buell,C.R., Ro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Libraries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ronning, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 22-JAN-2002
CPRO30M16 5'
                                                                                                                                                                                                                                                                                                                                                                                                                       6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Van Aken, S
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roots were
                                629
                                                                                                    569
                                                                                                                                     326
                                                                                                                                                                                                                                             449
                                                                                                                                                                                                                                                                                446
                                                                                                                                                                                                                                                                                                                  392
206
                                                               266
                                                                                                                                                                        509
                                                                                                                                                                                                          386
                                                                                                                                                                                                                                                                                                                                                                                                                       Ŋ
```

```
Š
                                                                                  Š
                                                                                                                        밁
                                                                                                                                                        Š
                                                                                                                                                                                               밁
                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
BJ453783/c
                                                    밁
                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                 439
                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                         496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    630
                                                                                                                                                            394 TACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACACGATGAATTCCTGCA 453
                                                                                                                                                                                                                                                                                                           274 CTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85
                                                                         GTGGGACTTGGATTTTCGTAACACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCA
                  GGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGA
                                                                                                                          AAAACTGTACCCCTGCCTAGTTGCTGGAACAGCACAAATACCATCCGGTGGATACCAGAT
                                                                                                                                                                                                 TTTAGGTGGTACTGCCGTGCAAAGTTCCTGCAGCTGAAGTTTTGTCGGACGTCTGGTGCA
                                                                                                                                                                                                                                   CCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCTGGTGCA 393
                                                                                                                                                                                                                                                                         CTTCTTCCGCCTGATCCACCTTCCCTTTGACA---GTTGAAATATGAGGCAGCCACAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T---CTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC 746
                                                    CTTGGTTCTGGTCTTTCATAAACTACAAGCTCTCGGCCGAAGCTGGCACCAGTTGTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCAATCACTCTTGCAACAATAAGTGGTTCAATATCTCTACAAGACATATTGATCCTT 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTATATTTATAGACATCTTTGATCTT 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTGCTTCCATTATATATCACATTCATTTTCACACTTGGATTGAAACTATCAACTACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCACACGAGGCTTAGAAGCAATGATAGGAGGCATGAGTTCGTGACCATTAAACACTTG 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BJ453783 498 bp mRNA
BJ453783 K. Sato unpublished cDNA library,
vegetative stage leaves Hordeum vulgare su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2002)
Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sato, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hordeum vulgare subsp. vulgare.
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            National Institute of Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center For Genetic Resource Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Barley EST sequencing project in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Spermatophyta; Magnoliophyta; Liliopsida; Poales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BJ453783.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      baak44h08 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Triticeae; Hordeum. (bases 1 to 498)
                                                                                                                                                                                                                                                                                                                                                                                                                                         132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yata, Mishima,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81-559-81-6856
81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saisho, D. and Takeda, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="K. Sato unpublished cDNA
Akashinriki vegetative stage leaves"
/tissue_type="leaves"
                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="vegetative stage"
114 c 129 g 123 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:112509"
/clone="baak44h08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Hordeum vulgare subsp. vulgare"
/cultivar="Akashinriki"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:21132359
                                                                                                                                                                                                                                                                                                                                                             19.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shizuoka
                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                            Score 166.8; DB 13;
Pred. No. 2.3e-19;
0; Mismatches 187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear EST 23-MAY-200
ry, cv. Akashinriki
subsp. vulgare cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Okayama
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                Length
library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ear EST 23-MAY-2002
Akashinriki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Univ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Poaceae;
                                                                                                                                                                                                                                                                                                                                              ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CV.
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                      513
                    573
                                                                                                                            320
                                                                                                                                                                                                 380
                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                             333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                                              ۲,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                              Ş
                                                                                               Ş
                                                                                                                                 В
                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
BJ448552/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                  390
                                                                  444
                                                                                                                                   501
                                                                                                                                                                 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           259
 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          754
                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         79
                  TGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGCACACGATGAATTCC 449
                                                                                 AAGGCCGAGATTGTAGATCTCAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGG 389
                                                                                                                               AAACCTTCTTCCGCCTGATCCACCTTCCCTTTGACA---GTTGAAATATGAGGCAGCCAC 445
                                                                                                                                                               AAGTCTTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGG 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGTTGTAGGCTATCCTTAATGGAACGGTTGATGTAAATGGATCAAGCACATCTTGCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTCGTGGCTTACTTACAATTGCAGATGGTCTTAGCTCAGCACCTGCCAGAACTAGCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTT 693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGTCTGGATCCACCAATATCAGGGTGTAGAACTCTCATGTCACTGCCACCGAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCA 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGATGTCTGACACCATCCAGTGCAAGTACTCCCTTAGTGATGGGTGACTTGGGCTTGGA
TGCAAAAACTGTACCCCTGCCTAGTTGCTGGAACAGCACAAATACCATCCGGTGGATACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hordeum vulgare subsp. vulgare.
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BJ448552 K. Sato unpublished cDNA library, cv. vegetative stage leaves Hordeum vulgare subsp. baak20f16 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center For Genetic Resource Information National Institute of Genetics
1111 Yata, Mishima, Shizuoka 411-8540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sato,K., Saisho,D. and Takeda,K. Barley EST sequencing project in Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BJ448552.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 671)
                                                                                                                                                                                                                                                                                   189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81-559-81-6855
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81-559-81-6856
                                                                                                                                                                                                                                                                                                                                                                                                                                            tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                                                                                                                                                             /clone_lib="K. Sato unpublished cDNA
Akashinriki vegetative stage leaves"
/tissue_type="leaves"
                                                                                                                                                                                                                                                                              /dev_stage="vegetative stage"
142 c 166 g 173 t
                                                                                                                                                                                                                                                                                                                                                                                         /organism="Hordeum vulgare subsp. vulgare"
/cultivar="Akashinriki"
                                                                                                                                                                                                                                                                                                                                                                 /clone="baak20f16"
                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:112509"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:21127178
                                                                                                                                                                                                                                                                                                                                                                                                                                .671
                                                                                                                                                                                                                 19.2%;
60.5%;
                                                                                                                                                                                                0;
                                                                                                                                                                                                               Score 164; DB 1
Pred. No. 6e-19;
                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIG and Okayama Univ
                                                                                                                                                                                                                              DB 13;
                                                                                                                                                                                                185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Japan
                                                                                                                                                                                                                           Length 671;
                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                others
                                                                                                                                                                                                                                                                                                                                             library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vulgare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ear EST 23-MAY-2002
Akashinriki
                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA clone
                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        200
                                                              385
                                                                                                                                                                                                1;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
BJ315664/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                   ORIGIN
                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
  Query Match 18.4%;
Best Local Similarity 59.0%;
Matches 289; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    264 TCCAGGGATGTCTGACACCATCCAGTGCAAGTACTCCCTTAGTGATGGGTGACTTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144 ATCAACTCGTGGCTTACTTACAATTGCAGATGGTCTTAGCTCAGCACCTGCCAGAACTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTTTGGCCATAAGTAACCTTTAGAGGATTGATTGATCTATTAAACGGATCAAGGAACGT 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCAACTCTTGGCCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAGTGGGACTTGGATTTTCGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGAGCGTCTGGATCCACCAATATCAGGGTGTGTAGAACTCTCATGTCACTGCCACCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATCTTGGTTCTGGTCTTTCATAAACTACAAGCTCTCGGCCGAAGCTGGCACCAGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTATTGTTGTAGGCTATCCTTAATGGAACGGTTGATGTAAATGGATCAAGCACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   busib664 Y. Ogihara unpublished
aestivum cDNA clone whyf19i17 S
BJ315664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                вJ315664
ВJ315664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center For Genetic Resource Information National Institute of Genetics Ill1 Yata, Mishima, Shizuoka 411-8540, Tel: 81-559-81-6856 Fax: 81-559-81-6855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Expressed genes in Triticum 
Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Spermatophyta; Magnoliophyta; Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Tadasu Shin-i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ogihara, Y. and Murai, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bread wheat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BJ315664.1 GI:20121218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 597)
                                                                                                        153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tshini@genes.nig.ac.jp
Location/Qualifiers
                                                                                                                                                                              hydroponic conditions at UC Davis, salt stressed for 12 hours, and for 7 days, then dissected and frozen (Akhunov in J Dvorak Lab). Total RNA was prepared from sheath tissue, equal quantities of RNA were pooled from the two samples, polyA was purified from the pooled RNA, a cDNA library was made, and the cDNA clones were in vivo excised to give pBluescript phagemids in the TJ Close lab at the University of California, Riverside (Akhunov, Chir
                                                                                                    Choi, Close, Fenton, Kianian, Otto, Simons, Zhang).

Plasmid DNA preparations and DNA sequencing were
performed in the OD Andersson lab (all other authors)."

151 c 143 g 147 t 3 others
                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Y. Ogihara unpublished cDNA library, Wh_]
/tissue_type="spikelet at early flowering"
/dev_stage="Feekes' scale 6"
/note="Vector: Lambda Uni-ZAP XR, excised phagemid;
Site_1: EcoRI; Site_2: XhoI; Plants were grown under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cultivar="Chinese Spring"
/db_xref="taxon:4565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="whyf19i17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Triticum aestivum'
Score 157.2; DB 1
Pred. No. 9.4e-18;
0; Mismatches 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Liliopsida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA linear EST 09-APR-2002 cDNA library, Wh_yf Triticum
                                        13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Embryophyta;
a; Poales; Poa
    Indels
                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Poaceae;
                                            597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tracheophyta;
  ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      Wh_yf"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pooideae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85
                                                                                                                                                                                       Chin
```

```
В
                                      Ş
밁
            ð
                                                     В
                                                                 δÃ
                                                                               밁
                                                                                            ş
                                                                                                         ğ
                                                                                                                      δ
                                                                                                                                     밁
                                                                                                                                                 Q
                                                                                                                                                                Вþ
                                                                                                                                                                            Ş
                                                                                                                                                                                          밁
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                     В
                                                  707 CCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTA 766
                                                                             332 TCCAGTGAAGGTGCTCCCTTAGATATGGATCACTTGGCCCTGGCACATCAGGGTCTGTCA 273
                                                                                                                530 ACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTTGGAACATCTGGATCCACCA 589
                                                                                                                                                                                                                  767 TAAGAGGGTC 776
                                                                                                                                                                                                   350 CAGCAAACTCGCGAGTGTTGAAGTTCTGGCGCCACCCTGGTGCATACACTGTTTTGCCTGC 409
92 TAAGAGGTTC 83
                                                                                                                                                                                         453
```

Search completed: May 2, 2003, 11:50:32 Job time : 1785.5 secs

```
Run
                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maximum DB
 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       on :
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                856
842.4
71.8
47
47
                                                                                                                                                                                                                                                                         Score
seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic search, using sw model
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-845-849-3
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    May 1, 2003, 15:58:02; Search time 60 Seconds
                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                      Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ctcgagttttttttttttt.....ggggatccactagttctaga 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.5
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                            /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                         Length
DB
      US-09-060-726A-3
US-09-060-726A-1
US-07-64A-372-1
US-08-467-948A-3
US-08-467-948A-3
US-08-482-130C-60
US-08-484-211C-60
US-08-906-616-60
US-08-906-616-60
US-08-906-616-60
US-08-906-616-60
US-08-906-613-60
US-08-906-971A-10
US-08-461-146C-3
US-08-461-146C-3
US-08-461-145C-11
US-08-461-145C-11
US-08-461-145C-11
                                                                                                                                                                                                                                                                        Ħ
                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (without alignments)
4375.255 Million cell updates/sec
    sequence 60, Ap
Sequence 60, Ap
Sequence 60, Ap
Sequence 60, App
Sequence 60, App
Sequence 60, App
Sequence 60, Appl
Sequence 30, Appl
Sequence 31, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           882724
                                                                                                                                                                                                                                                                        Description
                                                                                                                                                                                                    Sequence
Sequence
Sequence
                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                     Sequence
```

APPLICANT: Weigel, Detlef
APPLICANT: Weigel, Detlef
APPLICANT: Salk Institute
FITTLE OF INVENTION: FLOWERING LOCUS T (FT) ANI
FILE REFERENCE: SALKINS.026A
CURRENT APPLICATION NUMBER: US/09/060,726A
CURRENT FILING DATE: 1999-04-15
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 856
TYPE: DNA
OCOANTON: Assistance of the literal control of the literal

AND GENETICALLY MODULATED FLOWER DEVELOPMENT

Sequence 3, Application US/09060726A; Patent No. 6225530; GENERAL INFORMATION:

US-09-060-726A-3 RESULT 1

C	C	O	O	O	a	C	C	ဂ	ဂ	ဂ	ဂ	O	c	ဂ	O	O	C
45	.44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
43.6	43.6	43.6	43.6	43.6	43.8	43.8	43.8	43.8	43.8	43.8	44.4	44.6	44.8	44.8	45	45	45.4
5.1																	
860	860	860	860	860	2775	2775	1058	1058	1058	1058	866	545	3328	897	1585	1585	2503
1	۳	 -	μ.	Н	4	-	4	4	4	4	4	4	4	4	4	4	4
US-08-456-265A-33	US-08-449-043-33	US-08-444-803-33	US-08-449-315-33	US-08-181-271A-33	US-09-060-208-1	US-08-730-771-1	US-09-072-596-14	US-09-056-556-14	US-08-818-111-14	US-08-818-112-14	US-09-257-179-11	US-09-227-357-125	US-08-960-048-1	US-08-899-330-14	US-09-022-765-54	US-09-183-861-54	US-08-628-829-7
-	-	-	Sequence 33, Appl	Sequence 33, Appl	Sequence 1, Appli	Sequence 1, Appli	•	-	-	-	Sequence 11, Appl	Sequence 125, App	Sequence 1, Appli				Sequence 7, Appli
	1 US-08-456-265A-33 Sequence 33,	45 43.6 5.1 860 1 US-08-449-043-33 Sequence 33, 45 43.6 5.1 860 1 US-08-456-265A-33 Sequence 33,	43 43.6 5.1 860 1 US-08-444-803-33 Sequence 33, .44 43.6 5.1 860 1 US-08-449-043-33 Sequence 33, 45 43.6 5.1 860 1 US-08-456-265A-33 Sequence 33,	42 43.6 5.1 860 1 US-08-449-315-33 Sequence 33 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 44 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 45 43.6 5.1 860 1 US-08-456-265A-33 Sequence 33	41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 33 42 43.6 5.1 860 1 US-08-443-315-33 Sequence 33 43 43.6 5.1 860 1 US-08-444-803-33 Sequence 33 .44 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 45 43.6 5.1 860 1 US-08-456-265A-33 Sequence 33	40 43.8 5.1 2775 4 US-09-060-208-1 Sequence 1, 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 33, 42 43.6 5.1 860 1 US-08-449-315-33 Sequence 33, 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 33, 44 43.6 5.1 860 1 US-08-449-043-33 Sequence 33, 45 43.6 5.1 860 1 US-08-449-043-33 Sequence 33, 46 43.6 5.1 860 1 US-08-456-265A-33 Sequence 33, 47 48 48 48 48 48 48 48 48 48 48 48 48 48	39 43.8 5.1 2775 1 US-08-730-771-1 Sequence 1, 40 43.8 5.1 2775 4 US-09-060-208-1 Sequence 1, 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 33 42 43.6 5.1 860 1 US-08-449-315-33 Sequence 33 43 43.6 5.1 860 1 US-08-449-033-33 Sequence 33 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 43.6 5.1 860 1 US-08-450-265A-33 Sequence 33	38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 1, 39 43.8 5.1 2775 1 US-08-730-771-1 Sequence 1, 40 43.8 5.1 2775 4 US-09-060-208-1 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 3, 42 43.6 5.1 860 1 US-08-449-315-33 Sequence 33 43 43.6 5.1 860 1 US-08-449-313-33 Sequence 33 44 43.6 5.1 860 1 US-08-45-265A-33 Sequence 33 45 43.6 5.1 860 1 US-08-45-265A-33 Sequence 33	37 43.8 5.1 1058 4 US-09-055-556-14 Sequence 14 38 43.8 5.1 1058 4 US-09-072-556-14 Sequence 14 39 43.8 5.1 2775 1 US-08-730-771-1 Sequence 1, 40 43.8 5.1 2775 4 US-09-060-208-1 Sequence 1, 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 33 42 43.6 5.1 860 1 US-08-449-315-33 Sequence 33 43 43.6 5.1 860 1 US-08-449-335 Sequence 33 44 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 45 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 46 43.6 5.1 860 1 US-08-449-043-33 Sequence 33	36 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14 38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14 39 43.8 5.1 2775 1 US-08-730-771-1 Sequence 1, 40 43.8 5.1 2775 4 US-09-060-208-1 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 3, 42 43.6 5.1 860 1 US-08-449-315-33 Sequence 3, 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 44 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 45 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 46 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 47 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 48 43.6 5.1 860 1 US-08-456-265A-33 Sequence 3,	35 43.8 5.1 1058 4 US-08-818-112-14 Sequence 14 37 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14 38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14 39 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14 40 43.8 5.1 2775 1 US-08-730-771-1 Sequence 1, 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 3, 42 43.6 5.1 860 1 US-08-449-313-3 Sequence 3, 43 43.6 5.1 860 1 US-08-449-313-3 Sequence 3, 44 43.6 5.1 860 1 US-08-449-313-3 Sequence 3, 45 43.6 5.1 860 1 US-08-449-043-3 Sequence 3, 46 43.6 5.1 860 1 US-08-456-265A-3 Sequence 3, 47 48 48 48 58 58 58 58 58 58 58 58 58 58 58 58 58	34 44.4 5.2 866 4 US-09-257-179-11 Sequence 11 35 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14 36 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14 38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14 39 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14 39 43.8 5.1 2775 1 US-08-730-771-1 Sequence 1, 40 43.8 5.1 2775 4 US-09-060-208-1 Sequence 1, 41 43.6 5.1 860 1 US-08-449-313-33 Sequence 33 42 43.6 5.1 860 1 US-08-449-313-33 Sequence 33 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 44 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 45 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 46 43.6 5.1 860 1 US-08-449-043-33 Sequence 33 47 48 48 5.1 860 1 US-08-456-265A-33 Sequence 33	33 44.6 5.2 54.5 4 US-09-227-357-125 Sequence 12. 34 44.4 5.2 86.6 4 US-09-227-179-11 Sequence 13. 35 43.8 5.1 1058 4 US-08-818-112-14 Sequence 14. 36 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14. 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14. 38 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-196-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-196-11 Sequence 14. 40 43.8 5.1 2775 4 US-09-060-2081 Sequence 14. 41 43.6 5.1 86.0 1 US-08-449-315-33 Sequence 33. 42 43.6 5.1 86.0 1 US-08-449-043-33 Sequence 33. 43 43.6 5.1 86.0 1 US-08-449-043-33 Sequence 33. 45 43.6 5.1 86.0 1 US-08-449-043-33 Sequence 33.	32 44.8 5.2 33.28 4 US-08-060-048-1 33 44.6 5.2 34.8 5.2 54.5 4 US-09-227-357-125 Sequence 1.2 34 44.4 5.2 86.6 4 US-09-227-179-11 Sequence 11.2 35 43.8 5.1 1058 4 US-08-818-112-14 Sequence 14.2 36 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14.2 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14.2 38 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14.2 39 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14.2 39 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14.2 40 43.8 5.1 2775 1 US-08-720-771-1 Sequence 1.2 41 43.6 5.1 86.0 1 US-08-449-315-33 Sequence 3.3 42 43.6 5.1 86.0 1 US-08-449-315-33 Sequence 3.3 43 43.6 5.1 86.0 1 US-08-449-33-3 Sequence 3.3 45 43.6 5.1 86.0 1 US-08-449-043-33 Sequence 3.3 47 43.6 5.1 86.0 1 US-08-449-043-33 Sequence 3.3 48 49.6 5.1 86.0 1 US-08-449-043-33 Sequence 3.3 49 40.6 5.1 86.0 1 US-08-449-043-33 Sequence 3.3 40 40.6 5.1 86.0 1 US-08-456-265A-33 Sequence 3.3	31 44.8 5.2 897 4 US-08-989-330-14 Sequence 14, 32 44.8 5.2 3328 4 US-08-960-048-1 Sequence 14, 33 44.6 5.2 545 4 US-08-960-048-1 Sequence 125, 34 44.4 5.2 866 4 US-09-257-179-11 Sequence 125, 34 44.4 5.2 866 4 US-09-257-179-11 Sequence 14, 35 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14, 37 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14, 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14, 38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14, 38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14, 39 43.8 5.1 2775 1 US-08-730-771.1 Sequence 1, 41 43.6 5.1 860 1 US-08-181-271A-33 Sequence 3, 42 43.6 5.1 860 1 US-08-449-313-3 Sequence 3, 43 43.6 5.1 860 1 US-08-449-313-3 Sequence 3, 45 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 45 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 35 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 35 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 35 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 35 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 3, 35 43 43.6 5.1 860 1 US-08-456-265A-33 Sequence 3, 35 45 43.6 5.1 860 1 US-08-456-265A-33 Sequence 3, 35 45 45 45 45 45 45 45 45 45 45 45 45 45	30 45 5.3 1585 4 US-09-022-765-54 Sequence 14. 31 44.8 5.2 897 4 US-08-990-300-14 Sequence 14. 32 44.8 5.2 3328 4 US-08-960-048-1 Sequence 1. 33 44.6 5.2 545 4 US-09-227-357-125 Sequence 12. 34 44.4 5.2 866 4 US-09-227-157-11 Sequence 13. 35 43.8 5.1 1058 4 US-08-818-112-14 Sequence 14. 36 43.8 5.1 1058 4 US-08-818-111-14 Sequence 14. 37 43.8 5.1 1058 4 US-09-056-556-14 Sequence 14. 38 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-596-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-156-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-156-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-156-13 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-396-14 Sequence 14. 39 43.8 5.1 1058 4 US-09-072-396-13 Sequence 14. 39 43.8 5.1 2775 1 US-08-449-315-33 Sequence 33. 40 43.6 5.1 860 1 US-08-449-043-33 Sequence 33. 41 43.6 5.1 860 1 US-08-449-043-33 Sequence 33. 42 43.6 5.1 860 1 US-08-449-043-33 Sequence 33. 43 43.6 5.1 860 1 US-08-449-043-33 Sequence 33.	45 5.3 1585 4 US-09-183-861-54 45 5.3 1585 4 US-09-022-765-54 Sequence 54, 48 5.2 897 4 US-08-999-330-14 Sequence 14, 48 5.2 3328 4 US-08-990-088-1 5.2 3428 4 US-08-960-048-1 5.2 345 4 US-09-227-357-125 Sequence 12, 48 5.1 1058 4 US-09-257-179-11 Sequence 14, 48 5.1 1058 4 US-08-818-111-14 Sequence 14, 48 5.1 1058 4 US-08-818-111-14 Sequence 14, 48 5.1 1058 4 US-09-072-596-14 Sequence 14, 48 5.1 1058 4 US-09-072-596-14 Sequence 14, 49 5.1 1058 5.1 US-08-181-111-13 Sequence 14, 40 5.1 1058 5.1 US-08-131-33 Sequence 14, 40 5.1 1058 6 US-08-149-315-33 Sequence 33, 40 5.1 860 1 US-08-449-315-33 Sequence 33, 41 860 1 US-08-449-043-33 Sequence 33, 42 5.1 860 1 US-08-449-043-33 Sequence 33, 43 5.1 860 1 US-08-449-043-33 Sequence 33, 44 5.2 5.3 Sequence 33, 45 5.1 860 1 US-08-449-043-33 Sequence 33, 46 5.1 860 1 US-08-449-043-33 Sequence 33, 47 5.1 860 1 US-08-449-043-33 Sequence 33, 48 5.1 860 1 US-08-449-043-33 Sequence 33, 48 5.1 860 1 US-08-456-265A-33

QY 361 CGAGTGTTGAAGTTCTGGCGCCCACCCTGGTGCATACACTGTTTGCCTGCC	
Db 301 TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG 360	
QY 301 TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCCGAGATTGTAGATCTCAGCAAACTCG 360	
Db 241 CAATTGGTTATAAAGGAAGCCATCTAAAGTCTTCTTCCTCCCAGCCACTCTCCCTC 300	
QY 241 CAATTGGTTATAAAGGAAGCCATCTAAAGTCTTCCTTCCGCAGCCAGC	
Db 181 TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT 240	
QY 181 TAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT 240	
Db 121 TTATTACACACTTATATATTGAACTACTATAGGCATCATCACCGTTCGTT	
QY 121 TTATTACACACTTATATATTGAACTATAGGCATCATCACCGTTCGTT	
Db .61 TAATTATCGCATCACACACTATATAAGTAAAAACACTCTCATTTTCCTCCCCCCTCTCATTT 120	
QY 61 TAATTATCGCATCACACACTATATAAGTAAAAACACTCTCATTTTCCTCCCCCTCTCATTT 120	
Db 1 CTCGAGTTTTTTTTTTTTTTTTTTATAAATATAACACTTCATTTCATGTAGATTAATA 60	
Qy 1 CTCGAGTTTTTTTTTTTTTTTTTTTTTATAAATATAACACTTCATTTCATGTAGATTAATA 60	
Matches 856; Conservative 0; Mismatches 0; Indels 0; Gaps	
ORGANISM: Arabidopsis thaliana US-09-060-726A-3	

0;

```
TITLE OF INVENTION: FLOWERING LOCUS T (FT) /
TITLE OF INVENTION: MODIFIED PLANTS HAVING N
FILE REFERENCE: SALKINS.026A
CURRENT APPLICATION NUMBER: US/09/060,726A
CURRENT FILING DATE: 1998-04-15
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 855
           δ
                                       Qy
 밁
                            B
                                                        В
                                                                 Ωy
                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                               Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                         RESULT 2
US-09-060-726A-1/c
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                  Query Match
Best Local Similarity
Matches 854; Conserv
                                                                                                                                                                                                                      Sequence 1, Application US/09060726A
Patent No. 6225530
GENERAL INFORMATION:
APPLICANT: Weigel, Detlef
APPLICANT: Salk Institute
                                                                                                               NAME/KEY: CDS
LOCATION: (63)...(590)
.09-060-726A-1
                                                                                                                                   LENGTH: 855
TYPE: DNA
ORGANISM: Arabidopsis
FEATURE:
 735
               121
                                                         855
                                                                                                                                                                                                                                                                                      841
                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                            721
                                          61
                                                                      ۲
                                                      TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                                                                                                                                            ATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                                                                                                                      ATCCACTAGTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                              TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                           98.4%;
                                                                                                                                            thaliana
                                                                                    0;
                                                                                           Score 842.4; DB Pred. No. 1.2e-21
                                                                                   Mismatches
                                                                                                                                                                                                         T (FT)
                                                                                                                                                                                                         AND GENETICALLY MODULATED FLOWER DEVELOPMENT
                                                                                                 4.
                                                                                                 Length
                                                                                    Indels
                                                                                   ۲,
              180
                                         120
                                                        796
                                                                      60
                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
 676
                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                   ۲,
                                                                                                                                                                                         Ş
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
```

```
RESULT 3
US-07-644-372-1/c
                                                                                                                                                              Sequence 1, Application US/07644372 Patent No. 5416009 GENERAL INFORMATION:
                                                                                                                APPLICANT: Lazzeri, Mario E.
APPLICANT: Nutman, Thomas B.
APPLICANT: Weiss, Niklaus
TITLE OF INVENTION: A DNA SEGMENT ENCODING
TITLE OF INVENTION: IMMUNODIAGNOSTIC ANTIGE
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: CUSHMAN, DARBY
STREET: 1615 L. Street, N.
                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                              316
                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                  376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 675
                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                     136
                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                        196
                                                                                                                                                                                                                                                                                                                                                                          256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                            STREET: 1615 L. CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                             COUNTRY: USA
ZIP: 20036
                                                                                                                                                                                                                                                                  76
                                                                                                                                                                                                                               16
                                                                                                                                                                                                                                                                                                                                                                                                            ATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                       TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                     GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                     ANTIGEN
  #
                                                                                                                             SPECIFIC
  25
                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                    17
                                                                                                                                                                                                                                                                                                     77
                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                        137
                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                           197
                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                              257
                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 616
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; NAME/KEY:
; LOCATION:
US-07-644-372-1
                                                                                                                                                                                                                                                       US-08-467-948A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches .217; Conserv
                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (202)822-0944 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                          tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS LENGTH: 822 base pairs
                                                           TITLE OF INVENTION: Polynucleotides Encoding Human G-Protein
TITLE OF INVENTION: Coupled Receptor GPR2
                             CORRESPONDENCE ADDRESS
                                                 NUMBER OF SEQUENCES:
                                                                                               APPLICANT:
                                                                                                              APPLICANT:
                                                                                                                               APPLICANT:
                                                                                                                                            APPLICANT:
                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      590 TAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             471 GTAACACAATCTCATTGCCAAAGGTTG-TTCCAGTTGTAGCAGGGATATCAGTCACCA 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             577
                                                                                                                                                                                                                                                                                                                        217 TGA 215
                                                                                                                                                                                                                                                                                                                                                     710 TTA 712
                                                                                                                                                                                                                                                                                                                                                                                   650 GAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCT 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             397 ACCAATGGTGCCACTCTGAATACGGGGTTTTTTCGAGATGGTGCGTCCGGATCAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           530 ACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411 AAGCTGTCGAAACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTC 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      354 AAACTCGCGAGTGTTGAAGTTCTGGCG----CCACCCTGGTGCATACACTGTTTGCCTGCC 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294 CTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGC 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: UFILING DATE: 19910123
                                                                                                                                                                                                                                                                                                                                                                                                                                               TAACGAGCGTATATAAGGCTCCAGGTTCCGCATCCCATGATACTTTTGTCGGCTGATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAATCCATAACTTTGAAATTTCGGCGATTTCCGCCATGTTGAGTATCCGTGATACTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGTTGTTTATAAACCAAGAATACATAACGATGAAGTCCTGTGCCTTTTCGTGGACCTGA 458
                                                                                                                                                                                                                           , Application US/08467948A
5998164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1: 822 base pairs
: STERNE, KESSLER,
1100 NEW YORK AVE.,
                                                                                                                                                           CAO, LIAN
                                                                                          GENTZ, REINER
BULT, CAROL J.
SUTTON III, GRANGER G.
ROSEN, CRAIG A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
52..507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (202)861-3000
                                                                                                                                                                           LIANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8.4%;
51.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/07/644,372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 71.8; DB 1;
Pred. No. 5.8e-10;
GOLDSTEIN & FOX P.L.L.C NW, SUITE 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 822;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        518
                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ŋ
```

```
밁
                                                                                                                                                                                                                                                                                                                                              ; Patent No. 6090575; GENERAL INFORM
                                                                                                                                                                                                                                                                                                                                                                                                          US-08-467-947A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NAME/KEY:
; LOCATION:
US-08-467-948A-3
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2018 CTCAACCCAACCTCGTGCCGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA 2072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 20005
COMPUTER READABLE FORM:
                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 06-JUN-1
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 202-371-2600
SOFTWARE: PATENTIN REI
CURRENT APPLICATION DATA:
                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 30-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     802 CTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA 856
            COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN RELEASE #1.0, VERSION #1.30
                                                                                                                                    ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. STREET: 1100 NEW YORK AVE., NW, SUITE 600 CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid STRANDEDNESS: both TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 36
REFERENCE/DOCKET NUMBER:
                                                                                             COUNTRY: UZIP: 20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US95/04079 FILING DATE: 30-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH:
                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
50; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WASHINGTON
: DC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STEFFE,
                                                                                                                                                                                                                                                                                                                                                                                          Application US/08467947A
                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2185 base pairs
                                                                                                            USA
                                                                                                                                                                                                                                                GENTZ, REINER
BULT, CAROL J.
SUTTON III, GRANGER G.
ROSEN, CRAIG A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                              CAO, LIANG
NI, JIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202-371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SYSTEM: PC-DOS/MS-DOS
PATENTIN RELEASE #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               884..2062
                                                               FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERIC K.
                                                                                                                                                                                                     Polynucleotides Encoding Human G-Protein Coupled Receptor GPR1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/467,948A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36,688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 47; DB 2; Pred. No. 0.003; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1488.1140003/EKS/KLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

US/08/467,947A

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; NAME/KEY:
; LOCATION:
US-08-467-947A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-485-455D-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 5.5%;
Best Local Similarity 90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 202-3/1-201
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
LENGTH: 2185 base pairs
                                                                                      APPLICATION NUMBER: US/08/485,455D FILING DATE: 07-JUN-1995 CLASSIFICATION: 424 ATTORNEY/AGENT INFORMATION: NAME: Connell, Gary J. REGISTRATION NUMBER: 32,020 REFERENCE/DOCKET NUMBER: 2618-25-C1-3 TELECOMMUNICATION INFORMATION: TELECOMMUNICATION INFORMATION: TELECOMMUNICATION INFORMATION:
                                    TELEFAX: (303) 863-0223 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 30-MAK-1>3J
ATTORNEY/AGENT INFORMATION:
NAME: STEFFE, ERIC K.
NAME: STEFFE, A6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2018 CTCAACCCAACCTCGTGCCGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA 2072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      802 CTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 1700 Lincoln Street, Suite 3500 CITY: Denver STATE: Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid STRANDEDNESS: both TOPOLOGY: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60, Application US/08485455D
o. 5712143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
234 base pairs
cleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grieve, Robert B.
Rushlow, Keith E.
Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
884..2062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sheridan Ross P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UMBER: PCT/US95/04079
30-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Gary L.
FLEA PROTEASE PROTEINS, NUCLEIC ACID MOLECULES, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36,688
                                                                                                                                2618-25-C1-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 47; DB 3; Pred. No. 0.003; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1488.1140002/EKS/KLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2185;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: CDS
; LOCATION: 1...
US-08-485-455D-60
                                                              US-08-482-130C-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-482-130C-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 5.5
Best Local Similarity 73.2
Matches 60; Conservative
               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
      Matches .60;
                                                                                                                                                                                           TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,0
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (303) 863-9700
                                                                                                        FEATURE:
                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 1700
CITY: Denver
STATE: Colora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       775 TCTCTTATATTATAGACATCTTTGATCTTGAACAACCTCGTGCTGAATTCCTGCAGCC 834
                                                                          NAME/KEY: CDS
LOCATION: 1..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/0 FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: UZIP: 80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69 CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                    TOPOLOGY:
                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60, Application US/08482130C
o. 5962257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                               nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grieve, Robert B. Rushlow, Keith E.
    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Frank, Glenn R.
                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sheridan Ross P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                 single
                5.5%;
73.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          :, Gary L.
FLEA PROTEASE PROTEINS, NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULES,
                                                                                                                                                                                                                                                                                                                                                            US/08/482,130C
                                                                                                                                                                                                                                                                                32,020
                                                                                                                                                                                                             60:
    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                     2618-25-C1-1
Score 46.8; DB 2
Pred. No. 0.0015;
0; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 46.8; DB 1;
Pred. No. 0.0015;
0; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USES THEREOF
                               DB 2;
                            Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 234;
      Indels
    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 9
US-08-906-769-60/c
; Sequence 60, Application US/08906769
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-484-211C-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-484-211C-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 60,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,211C
FILING DATE: 07-7UN-1995
CLASSIFICATION: 424
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: CONNELL, GARY J.
REGISTRATION UNMBER: 32,020
REFERENCE/DOCKET NUMBER: 26:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: I.
CITY: Denver
CITY: Colorado
TYPE: COLORADO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID TITLE OF INVENTION: MOLECULES, AND HERE THE OF INVENTION: MOLECULES, AND HERE THE PROTECTION MOLECU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                    129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                 835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              775 TCTCTTATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCCTGCAGCC 834
                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
LOCATION: 1..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                                                                                                                                               CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0, Application US/08484211C
5972645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sheridan Ross P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2618-25-C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 46.8; DB 2;
Pred. No. 0.0015;
0; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
RESULT 10
US-08-906-616-60/c
                                                         밁
                                                                                   δõ
                                                                                                                  밁
                                                                                                                                            δÃ
                                                                                                                                                                                                                                   us-08-906-769-60
                                                                                                                                                                         Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 0 FILING DATE: 24-APR-1996 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID TITLE OF INVENTION: MOLECULES AND USES THEREOF NUMBER OF SEQUENCES: 190
                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                 775 TCTCTTATATATATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCC 834
                                                                                   835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                         69
                                                                                                                                                                         Local Similarity 73.2 nes 60; Conservative
                                                                                                                                                                                                                                                  NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                         TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                         CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6077687
                                                                                                                                                                                                                                                                                                                                 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Connell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Silver, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaines, Patrick J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rushlow, Keith E. Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GITEVE,
                                                                                                                                                                                                                                                1..234
                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sheridan Ross & McIntosh
                                                                                                                                                                                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gary J.
                                                                                                                                                                                                                                                                                                                                                                                             863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Robert
                                                                                                                                                                                      5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us 08/639,075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/906,769
                                                                                                                                                                                                                                                                                                                                                                                                                                                       32,020
                                                                                                                                                                                                                                                                                                                                                                                60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . .
                                                                                                                                                                                                                                                                                                                                                                                                                                          2618-25-C2
                                                                                                                                                                       Score 46.8; DB 3;
Pred. No. 0.0015;
0; Mismatches 22;
                                                                                                                                                                          Indels
                                                                                                                                                                         0;
                                                                                                                                                                         Gaps
```

Patent No. 6121035 GENERAL INFORMATION:

APPLICANT:
APPLICANT:

Grieve, Robert B.
Rushlow, Keith E.
Wu Hunter, Shirley
Frank, Glenn R.

APPLICANT:

APPLICANT:

Sequence 60, Application US/08906616 Patent No. 6121035

0;

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                          US-08-817-795-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-906-616-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                          Sequence 60,
                                                                                                                                                                                                                                                                                        Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2616
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (303) 863-02 INFORMATION FOR SEQ ID NO:
                                                 TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                               · 129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 234 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                   CORRESPONDENCE
                                                                                                                     APPLICANT:
                                                                                                                                     APPLICANT:
                                                                                                                                                        APPLICANT:
                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                            835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           775 TCTCTTATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCC 834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                    UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/C
FILING DATE: 05-AUG-1997
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LICANT: Gaines, Patr
LICANT: Silver, Gary
LE OF INVENTION: FLE
                                                                                                                                                                                                                                                                                                                                                                                            CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80203
                                                                                                                                                                                                                                                                                            ), Application US/08817795
6139840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1700 Lincoln Street, Suite 3500
                                        VENTION: USE OF PROTEASE INHIBITORS AND VENTION: USE OF PROTEASE VACCINES TO PROTECT & VENTION: INFESTATION, AND FLEA PROTEASE VENTION: MOLECULES, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                       Dale,
                                                                                                                                                                                        Heath, Andrew W.
                                                                                                                                                                                                      Frank, Glenn R
                                                                                                                                                                                                                                     Rushlow,
                                                                                                                                                                                                                                       Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                      Arfsten, Ann
                                                                                                                                                                                                                         Hunter, Shirley Wu
                                                                                                                                                                    Yamaka, Miles Yamanaka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1..234
Sheridan Ross & McIntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sheridan Ross P.C.
                   ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                   Beverly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patrick J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.5%;
73.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FLEA AMINOPEPTIDASE PROTEINS AND USES THEREOF 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       us/08/906,616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2618-25-C2-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 46.8; DB 3; Pred. No. 0.0015;
                                                                FLEA PROTEASE PROTEINS, NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                    ANIMALS FROM FLEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                            RESULT 12
US-08-485-4438-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: US-08-817-795-60
                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                   GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (303 863-022 INFORMATION FOR SEQ ID NO:
ZIP: 80203
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FOR PC COMPATIBLE
COMPUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                          CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/14442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Rel CURRENT APPLICATION DATA:
                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                     835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          775 TCTCTTATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGCATTCCTGCAGCC 834.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                     STATE:
                                                                                  COUNTRY:
                                                                                                                 CITY: DENVER
                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Gary J. Connell REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/817,795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                               ADDRESSEE: SHERIDAN ROSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                      $ 60, Ar.
No. 6146870
                                                                                                                                                                                                                                                                                                                                                                                                          CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Denver
                                                                                                   င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Colorado
                                                                                                                                                                                                                                                                                                                               Application US/08485443B
                                                                                                                                 1700 LINCOLN ST.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                      Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                     USA
                                                                                                                                                                                                                                     Rushlow, Keith E.
Hunter, Shirley Wu
Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (303) 863-9700
                                                                                                                                                                                                                        Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.5%;
73.2%;
                                                                                                                                                                              , Gary L.
FLEA PROTEASE PROTEINS, NUCLEIC ACID
MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32,020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                   SUITE 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 46.8; DB 3;
Pred. No. 0.0015;
0; M1smatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-639-075A-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-485-443B-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 60, Application US/08639075A
Patent No. 6150125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
APPLICATION NUMBER: US/08/639,075A
FILING DATE: 24-APR-1996
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: CONNELL, GATY J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C2
                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
ABBLICATION UMMRED: US /08/630 0755
                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 303 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: CONDELL, GATY L.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  775 TCTCTTATATTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCC 834
                                                                                                                                                                                                                                         COUNTRY: UZIP: 80203
                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                               CITY:
                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
mes 60; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 1...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 07
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/485,443B FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                           ADDRESSEE: Sheridan Ross & McIntosh
STREET: 1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                                             Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : 234 base pairs nucleic acid
                                                                                                                                                                                                                                                                           Colorado
                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303 863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaines, Patrick J.
Silver, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stiegler, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Frank,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2618-25-C1-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 46.8;
Pred. No. 0
   2618-25-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8;
. 0.0015;
22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3; Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY:
; LOCATION:
US-08-639-075A-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-012-431-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 60, Applicati Patent No. 6180383 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (303) 863-022 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                        INFORMATION FOR SEQ ID NO: 60: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                835 CGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     775 TCTCTTATATATATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     y Match 5.5%;
Local Similarity 73.2%;
nes 60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69 CGGGGGATCCACTAGTTCTAGA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                             ZIP: 80203

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTLY Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
                                                                                                                             REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                             APPLICATION NUMBER: US 08/639,075
ETILING DATE: <UNKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
                                                                                                                                                                                                                                                       CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Grieve, Robert B.
Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    u, Application US/09012431
6180383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/012,431 FILING DATE: 23-Jan-1998
LENGTH: 234 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: Colorado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Denver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 1700 Lincoln
                                                                                           TELEFAX: (303)
                                                                                                              TELEPHONE: (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Sheridan Ross & McIntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1..234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (303)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaines, Patrick J.
Silver, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stiegler, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               863-9700
863-0223
                                                                                             863-0223
                                                                                                                863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 46.8; DB 3;
Pred. No. 0.0015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Street, Suite 3500
                                                                                                                                                    2618-25-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

0;

```
US-09-012-692-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
US-09-012-692-60/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-012-431-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 60, April No. 621457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 5.5%;
Best Local Similarity 73.2%;
Matches 60; Conservative
                                                                                                                                                                 TELEFAX: (303) 863-0223 NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 234 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDUNCTION OF THE COLORADO TISA
                                                 FEATURE:
                                                             MOLECULE TYPE:
                                                                                                                                                                                           NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 261
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TETTERAL
                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/639,075
EILING DATE: 24-APR-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 190
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross & McIntosh
STREET: 1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT: S11ver, Gary
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129 TATCTTGTAAGATGAGACGCGCTCAATCCAACCAAACGCTCGTGCCGAATTCCTGCAGCC 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        775 TCTCTTATATATATATAGACATCTTTGATCTTGAACAAACCTCGTGCTGCAATTCCTGCAGCC 834
                                                                                 TOPOLOGY:
                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
LOCATION: 1..234
SEQUENCE DESCRIPTION: SEQ ID NO: 60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear MOLECULE TYPE: cDNA
                                                                                        H: 234 base pairs
nucleic acid
NDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09012692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stiegler, Gary
Gaines, Patrick J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wu Hunter, Shirley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Grieve, Robert B. Rushlow, Keith E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stiegler,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Frank, Glenn R.
                                                                                                                                                                                                                                                                                                                                                                                       US/09/012,692
                                                                                                                                                                  60:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                    2618-25-C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 46.8; DB 4;
Pred. No. 0.0015;
n. Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                         Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

0

Search completed: May 1, 2003, 21:56:17 Job time : 64 secs

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
     00000000
                                                                                                                                   00000
                                                                                                                                                                                                          C
                                                                                                                                                                                                                                                                 ŏ.
      110
111
113
114
115
116
118
                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                Score
                                                                                                                                                                                                                                                               Query
Match
                                                                                                                                                                                                100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           May 1, 2003, 15:58:02; Search time 156.5 Seconds (without alignments) 6463.052 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-845-849-3
856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              746064 seqs, 590810554 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ctcgagttttttttttttt.....ggggatccactagttctaga
                                         Published_Applications_NA: *
                                                                                                                                                                                                                                                                                                                                                                              : /cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq:*
: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq:*
: /cgn2_6/ptodata/2/pubpna/US09_PUBCOMB.seq:*
: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
2: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US60_NEW_PUB.seq:*
4: /cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.5
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
/cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
                                                                                                                                                                                                                                                               Length
                856
856
856
856
858
528
5234
503
503
367
367
367
5485
5485
515
                                                                                                                                                                                                                                                                 DB
                             9
10
10
9
9
9
                                                                                                                                            90
                10
                                                                                                                                                                       9
                                                                                                                                                                                                 10
US-09-845-849-1
US-09-845-849-3
US-09-938-842A-2635
US-09-938-842A-1501
US-09-938-842A-1501
US-09-9764-847-380
US-09-764-807-248
US-09-764-860-248
US-09-764-868-303
US-09-764-868-303
US-09-764-861-248
US-09-764-868-303
US-09-764-868-303
US-09-764-891-2323
US-09-764-891-2323
US-09-925-299-270
US-09-925-299-270
US-09-925-299-270
US-09-925-299-270
                                                                                                                                                                                                                        US-09-291-809C-1
US-09-291-809C-3
                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1492128
         Sequence 1, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 2635, Ap
Sequence 1501, Ap
Sequence 6398, Ap
Sequence 380, App
Sequence 380, App
Sequence 248, App
Sequence 248, App
Sequence 303, App
Sequence 303, App
Sequence 404, App
Sequence 2323, App
Sequence 2323, App
Sequence 270, App
Sequence 270, App
                                                                                                                                                                                                                                                               Description
```

D 60 6	B 04	Db Qy	5 H 0	O O O O O O O O O O O O O O O O O O O	T)	
ωίν	79	85	Query I Best L Matche	0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2. 0.09-2.	∃	20 20 20 20 20 20 20 20 20 20 20 20 20 2
TTA	1 TAATTA	1 CTCGAG	Match Local Simi nes 856;	Application of the control of the co		44444444444444444444444444444444444444
ACAC	ATCGCATCA	;TTTTTTTTTTTTTTTTTTTA 	ilarity Conserv	/C plication 001004983: ATION: ATION: at Instance wetlef Weis wath Tarion: WITION: WITION: ES SALKHI CATION NUMB GDATE: TION NUMB DATE: 19) DATE: 19) DATE: 19) DATE: 19) TON NUMB STEEQ for abidopsis stseQ for		0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.
TATAT	ACACAC 	TTTTT	100 100 ative	n US/0 131A1 1itute FLOWER FLOWER 1NS.02 10MBER: 1999-04 1988-04 1998-04 1998-04		2185 5599 579632 1032 1738 632 1741 2458 609 612 612 812 813 741 741 741 753 1753 1753 1753 1753 1754 1755 1755 1755 1772 1735 1772 1735 1735 1735 1735 1735 1735 1735 1735
TGA	TATA	TTTT	.00	A1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		00000000000000000000000000000000000000
CAMARCACICICA CATAGGCATCATO 	TAAAACACT 	TTTTATAAATATAACACTTCATTTCATGI 	Score 856; DB 10; Le Pred. No. 9e-206; 0; Mismatches 0; In	LOCUS T (FT) AND GENET: PLANTS HAVING MODULATED (09/291,809C (14/2099/08151)60,726 Version 4.0	ALIGNMENTS	US-10-024-494-3 US-09-925-299-309 US-09-925-299-309 US-09-925-299-352 US-09-933-204-3 US-09-933-204-3 US-09-938-4864-78 US-09-764-864-78 US-09-764-864-742 US-09-764-870-184 US-09-764-870-184 US-09-764-8864-76 US-09-764-886-341 US-09-764-886-341 US-09-764-886-341 US-09-764-886-341 US-09-764-886-341 US-09-764-886-341 US-09-764-886-341 US-09-764-886-352 US-09-764-886-352 US-09-764-8864-766 US-09-764-864-766 US-09-925-300-643 US-09-925-300-643 US-09-925-300-643 US-09-925-300-843
TACTCGTATCA 18	CTCTCATTT 1	ATGTAGATTAATA 60 TGTAGATTAATA 797	ength 856; indels 0; Gaps 0;	CALLY FLOWER DEVELOPMENT		Sequence 3, Appli Sequence 309, App Sequence 309, App Sequence 352, App Sequence 352, App Sequence 352, App Sequence 78, Appli Sequence 79, Appl Sequence 29, Appl Sequence 103, App Sequence 104, Appl Sequence 114, App Sequence 114, Appl Sequence 36, Appl Sequence 36, Appl Sequence 374, App Sequence 374, App Sequence 774, App Sequence 161, Appl Sequence 162, Appl Sequence 163, Appl Sequence 1643, Appl Sequence 1643, Appl Sequence 161, Appl Sequence 161, Appl Sequence 161, Appl Sequence 161, Appl Sequence 161, Appl Sequence 161, Appl Sequence 613, Appl Sequence 613, Appl Sequence 614, Appl Sequence 614, Appl Sequence 614, Appl Sequence 615, Appl Sequence 616, Appl Sequence 617, Appl Sequence 617, Appl Sequence 618, Appl

```
В
                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                      PRIOR APPLICATION NUMBER: PCT/U
PRIOR FILING DATE: 1999-04-13
PRIOR APPLICATION NUMBER: 09/06
PRIOR FILING DATE: 1998-04-15
NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows V
                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                      Sequence 3, Application US/09291809C Patent No. US20010049831A1
                                              SEQ ID NO 3
TYPE: DNA
ORGANISM: Arabidopsis
-09-291-809C-3
                                                                                                                          FILE REFERENCE: SALKINS.026CP1
CURRENT APPLICATION NUMBER: US/09/291,809C
CURRENT FILING DATE: 1999-04-14
                                                                                                                                                            TITLE OF INVENTION: FLOWERING LOCUS T (FT)
                                                                                                                                                                                    APPLICANT: Detlef Weigel APPLICANT: Salk Institute
                                 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                      136
                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             556
                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                     GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                 GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCTCCCCCACTCTCCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACAATATAAACACGACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA
                                   856
                                                                                         09/060,726
                                                                                                                PCT/US99/08151
                                                        Version
                                                                                                                                                             AND GENETICALLY MODULATED FLOWE
                                                                                                                                                             FLOWER DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                        17
                                                                                                                                                                                                                                                                                                                                                                                  77
                                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      617
```

RESULT 3 US-09-845-849-1/c

GENERAL INFORMATION:

APPLICANT: THE SALK INSTITUTE APPLICANT: WEIGEL, Detlef

FOR

STUDIES

Sequence 1, Application US/09845849 Patent No. US20020029395A1

```
Š
                               밁
                                              Ş
                                                                망
                                                                              Š
                                                                                               밁
                                                                                                              Ş
                                                                                                                               밁
                                                                                                                                             Qy
                                                                                                                                                               밁
                                                                                                                                                                              õ
                                                                                                                                                                                              밁
                                                                                                                                                                                                            Š
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                          δã
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 856;
                841
                                                781
                                                                                               661
                                                                                                               661
                                                                                                                               601
                                                                                                                                                109
                                                                                                                                                               541
                                                                                                                                                                              541
                                                                                                                                                                                               481
                                                                                                                                                                                                              481
                                781
                                                                721
                                                                                721
                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                               TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                            ATCCACTAGTTCTAGA
                                         ATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGG
                                                                                                                              TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                                       TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                     CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCCTC
                                                                                                                                                                                                                                                                                                                                                                                           ATCCACTAGTTCTAGA
                                ATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGG
                                                                                                                                                               TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                               AACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA
                                                                                                                                                                                                                                     AACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA
                                                                                                                                                                                                                                                                             TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                             CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                                                             TAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                      TAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
856
               856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 856; DB 10;
Pred. No. 9e-206;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                          660
                                840
                                                                780
                                                                                780
                                                                                               720
                                                                                                               720
                                                                                                                               660
                                                                                                                                                               600
                                                                                                                                                                              600
                                                                                                                                                                                              540
                                                                                                                                                                                                             540
                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

```
Š
                       밁
                                           Ş
                                                                      밁
                                                                                          Š
                                                                                                                 멍
                                                                                                                                        Š
                                                                                                                                                                  В
                                                                                                                                                                                    δÃ
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 856; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 13
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: KARDAILSKY, IGOT
TITLE OF INVENTION: FLOWERING LOCUS T (FT) AND GENETICALLY
TITLE OF INVENTION: MODIFIED PLANTS HAVING MODULATED FLOWI
FILE REFERENCE: SALKINS, 026DV1
CURRENT APPLICATION NUMBER: US/09/845,849
CURRENT FILING DATE: 2001-10-12
PRIOR APPLICATION NUMBER: 09/060,726
PRIOR FILING DATE: 1998-04-15
PRIOR FILING DATE: 1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-845-849-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 856
TYPE: DNA
ORGANISM: Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TAATTATCGCATCACACACTATATAAGTAAAAACACTCTCATTTTCCTCCCCCTCTCATTT 120
                                                                                                                     256
                                                                                                                                             601
                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                        496
                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                            556
                                                                                                                                                                                                                                                                                                                                                                      301 TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                    241 CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 TAAAATGGTTATTAAAATTAAAATACTATAGATGCATAAATCTCAGCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                       GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                              TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGG
                                   GATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAAGAGGGTCTCTT
                                                                                                                   TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                                              AACAATATAAACACGACGATGAATTCCTGCAGTGGGACTTGGATTTTCGTAACACACA
                                                                                                                                                                                                                                                                                                           TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                        CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 856; DB 10
Pred. No. 9e-206;
Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FLOWER DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
 840
                                             780
                                                                                                                                          660
                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                      137
                                                                                                                   197
                                                                                                                                                                                        600
                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                           437
                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                      617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 797
                       77
                                                                                                                                                                257
                                                                                                                                                                                                               317
                                                                                                                                                                                                                                                             377
                                                                                                                                                                                                                                                                                                                                                          497
                                                                                                                                                                                                                                                                                                                                                                                                         557
                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
; SEQ ID NO 3
LENGTH: 856
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-845-849-3
         Ş
                               В
                                                 Qγ
                                                                        밁
                                                                                        Qγ
                                                                                                               ₽
                                                                                                                                   Qy
                                                                                                                                                        밁
                                                                                                                                                                            Qy
                                                                                                                                                                                                  밁
                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                        VΩ
                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-845-849-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/09845849 Patent No. US20020029395A1
                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 09/060,726 PRIOR FILING DATE: 1998-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/845,849 CURRENT FILING DATE: 2001-10-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: KARDALİSKY, IGOR
TITLE OF INVENTION: FLOWERING
TITLE OF INVENTION: MODIFIED
FILE REFERENCE: SALKINS.026DV1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 13 SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: THE SALK INSTITUTE FOR BIOLOGICAL
            541
                               481
                                                    481
                                                                        421
                                                                                             421
                                                                                                                  361
                                                                                                                                                                              301
                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                     121
                                                                                                                                    361
                                                                                                                                                         301
                                                                                                                                                                                                  241
                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                               61
TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                    TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                             CGAGTGTTGAAGTTCTGGCGCCACCCTGGTGCATACACTGTTTGCCCTGCCAAGCTGTCGA
                                                                                                                                                                                                                                           TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                     TAAAATGGTTATTAAATTAAAATACTATAGATGCATAAATCTCATCAGAGTATGCAATAT
                                                                                                                                                                                                                                                                                                                                                                      CTCGAGTTTTTTTTTTTTTTTTTTATAAATATAACACTTCATTTCATGTAGATTAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCCACTAGTTCTAGA 1
                                                                                                                TGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAGCAAACTCG
                                                                                                                                                                                                  CAATTGGTTATAAAGGAAGAAGCCATCTAAAGTCTTCTTCCTCCGCAGCCACTCTCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCCACTAGTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                al Similarity
856; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WEIGEL,
                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Detlei
                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS T (FT) AND GENETICALLY PLANTS HAVING MODULATED FLOW
                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 856; Db ...
No. 9e-206;
                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MODULATED FLOWER DEVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STUDIES
                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                   540
                                                                        480
                                                                                             480
                                                                                                                420
                                                                                                                                    420
                                                                                                                                                         360
                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17
                              540
                                                                                                                                                                                                  300
                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
APPLICANT: Wang, Xun
APPLICANT: Wang, Xun
APPLICANT: Zhu, Tong
TITLE OF INVENTION: STRESS-REGULATED GENES OF
TITLE OF INVENTION: SAME, AND METHODS OF USE
FILE REFERENCE: SCRIP1300-3
CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/264,647
PRIOR FILING DATE: 2000-08-24
PRIOR REPLICATION NUMBER: US 60/264,647
PRIOR FILING DATE: 2001-01-16
PRIOR APPLICATION NUMBER: US 60/300,111
PRIOR FILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: 5379
SEQ ID NO 2635
LENGTH: 528
TYPE: DNA
ORGANISM: Arabidopsis thaliana
US-09-938-842A-2635
  밁
                        Š
                                                     밁
                                                                        Ωy
                                                                                                        밁
                                                                                                                               Q
                                                                                                                                                             밁
                                                                                                                                                                                   Ş
                                                                                                                                                                                                              В
                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 09-938-842A-2635/c; Sequence 2635, Application; Patent No. US20020160378A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
                                                      348
  288
                                                                                447
                                                                                                          408
                                                                                                                                   387
                                                                                                                                                              468
                                                                                                                                                                                       327
                                                                                                                                                                                                                 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                           267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                           CTAAAGTCTTCCTCCGCAGCCACTCTCCCTCTGACAATTGTAGAAAACTGCGGCCAC 326
                                                                                                     GGTGCATAAACCGTTTGTCTTCCGAGTTGCCGGAACAATACCAACACAATACGATGAAT
                                                                                                                                                         TGTAGCAGGGATATCAGTCACCAACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGG 566
                                                                                                                        TGGTGCATACACTGTTTGCCTGCCAAGCTGTCGAAACAATATAAACACGACGACGATGAAT 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGCAGTGGGACTTGGATTTTCGTAACACAACAATCTCATTGCCAAAGGTTGTTCCAGT 506
                                                                                                                                                                                                              CTACGTTCTTCTTCCCCCACAGCCATTCTCCCTCTGGCAGTTGAAGTAAGAGGCAGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCCACTAGTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCCGAGGGGGGACGTGGACTCTCGTAGCACACCACCTCATTGCCAAAGGCATTTCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCCACTAGTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCTTTAGAGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTTGAACCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTTGAACCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCATAACCAAAGTA
                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                             44.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/09938842A
                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                Score 377.6; DB 9;
Pred. No. 2.1e-85;
0; Mismatches 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLANTS, TRANSGENIC PLANTS
                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                 Gaps
                                                                                                        349
                                                                                                                                                                                    386
                                                                                                                                                                                                              469
                                                    289
                                                                                                                                                          409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONTAINING
                                                                                                                                                                                                                                                                  0
```

```
δÃ
                                                                        밁
                                                                                                           Ş
                                                                                                                                                     В
                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA; ORGANISM: Arabidopsis thaliana US-09-938-842A-1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zhu, Tong
TITLE OF INVENTION: STRESS-REGULATED GENES OF PL
TITLE OF INVENTION: SAME, AND METHODS OF USE
FILE REFERENCE: SCRIP1300-3
CURRENT APPLICATION NUMBER: US/09/938,842A
CURRENT FILING DATE: 2001-08-24
PRIOR APPLICATION NUMBER: US 60/227,866
PRIOR FILING DATE: 2000-08-24
PRIOR FILING DATE: 2000-08-24
PRIOR FILING DATE: 2000-01-01-16
PRIOR APPLICATION NUMBER: US 60/264,647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
US-09-98-842A-1501/c
Sequence 1501, Application
Patent No. US20020160378A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Harper, Jeff
APPLICANT: Kreps, Joel
APPLICANT: Wang, Xun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 5379
SEQ ID NO 1501
LENGTH: 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                    590
                                                                                                                                                                                                                                                                                                                                                                                       514 TTTCTCTTTGTGCGTTAAAGAAGACGGCCGCGACAGGAGACCAAGATCATACTCGACCG
                                                                          274
                                                                                                                                                       334
                                                                                                                                                                                             470
                                                                                                                                                                                                                                    394
                                                                                                                                                                                                                                                                        410
                                                                                                                                                                                                                                                                                                               454
                                                                                                                                                                                                                                                                                                                                                   353
                                                                                                                                                                                                                                                                                                                                                                                                                              293 TCTCCCTCTGACAATTGTAGAAAACTGCGGCCACGGGAAGGCCGAGATTGTAGATCTCAG 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 308; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48
                                                                                                                                                                                                                                                                                                               CAAATTTACGAGTGTTGAAGTGATCTCTCGAAGGGATATTAGGAAAGATAACACGTCTTT
                                                                                                                                                                                                                                  GCTTCTGCCTGAACAGAACAAACACAAACCTATGTATCCCTATGCTTGGCCTTGGCAATT
                    TAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACCAATCTCAACTCTTGGCTTGTTTT 649
TCACCAAAGTGAAGAAGGATCTGAGATCACCACGATGGATCTCAACCCTAGGCTTGGAGG
                                                                        TCCAGTGCAGGTGTTCTTTAGAAAGGGGTCACTAGGACCTGGAACATCTGGGTCTATCA
                                                                                              ACCAATGGAGATATTCTCGGAGGTGAGGGTTGCTAGGACTTGGAACATCTGGATCCACCA 589
                                                                                                                                                     CATAGCTCACCACCTCTTTGCCAAACGTAGCATCTGTTGTGCCGGGAATGTTTGTAACGA
                                                                                                                                                                         CGTAACACACAATCTCATTGCCAAAGGTTGTTCCAGTTGTAGCAGGGATATCAGTCACCA 529
                                                                                                                                                                                                                                                        CAAGCTGTCGAAACAATATAAACACGACACGATGAATTCCTGCAGTGGGACTTGGATTTT
                                                                                                                                                                                                                                                                                                                                               CAAACTCGCGAGTGTTGAAGTTCTGGCGCCCACCCTGGT---GCATACACTGTTTGCCTGC 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCAACAACACTGCCGACCACAAGAGGATCTCTACGACTTAAAGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCTCTATGGCCATAAGTGACCTTAAGAGAGACCAACCTCGTGAAAGGATCAAGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTCGGCACATCTGGATCCACCATAACCAAGGTGTAGAAATTTCTGAAGTCGTCTCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09938842A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 176.8;
Pred. No. 7.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .8e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PLANTS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSGENIC PLANTS CONTAINING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
··
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                         455
                                                                        215
                                                                                                                                                     275
                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                        469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲.
```

```
RESULT 8
US-10-092-154-380/c
; Sequence 380, Application US/10092154
; Publication No. US20030054375A1
; GENERAL INFORMATION:
; APPLICANT: ROSen et al.
; TITLE OF INVENTION: Nucleic Acids, Proteins,
; FILE REFERENCE: PC009C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA
; ORGANISM: Glycine max
; OTHER INFORMATION: Clone ID: 701098321H1
US-09-878-574-6398
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-878-574-6398/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Thompson, Michael D.
TITLE OF INVENTION: Nucleic Acid Molecules &
TITLE OF INVENTION: Nucleic Acid Molecules &
TITLE OF INVENTION: Plants
FILE REFERENCE: 38-21(15401)B
CURRENT APPLICATION NUMBER: US/09/878,574
CURRENT FILING DATE: 2001-12-21
PRIOR APPLICATION NUMBER: 09/333,535
PRIOR FILING DATE: 1999-06-14
NUMBER OF SEQ ID NOS: 15775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 6398
LENGTH: 251
                              Prior Application removed - See File Wrapper or Palm SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6398, Application Patent No. US20020110548A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                               CURRENT APPLICATION NUMBER: US/10/092,154
CURRENT FILING DATE: 2002-03-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                             NUMBER OF SEQ ID NOS: 2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Byrum, Joseph R.
TYPE: DNA
                  LENGTH: 503
                                                                                                                                                                                                                                                                                                                                                                                       747
                                                                                                                                                                                                                                                                                                                                                                                                                              131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       567 ACTTGGAACATCTGGATCCACCATAACCAAAGTATAGAAGTTCCTGAGGTCTTCTCCACC 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251 ACTTGGAGCATCTGGGTCAGTCATGATCAAGGTATAAGCAGTCCTCATGTCATCACCACA 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650 GAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCACCTCTCTTTGGCCATAAGTAACCT 709
                                                                                                                                                                                                                                                                                                                                                   71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34 ATGGCTCTATCACTCTAGTTCCCATATT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity es 127; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                            TTGCTTGGTGGAATATGTCACATTCATTTTTCCACTTGGGCTGAAAATGTCGACCACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCTCTTTGGCCATAAGTAACCTTTAGAGTGATTGATCTATTAAACGGATCAAGAACGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATCTCACCGCGTGGCTTGCCCATAATAGTAGAAGGCATTACCTCATGACCATTGGCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATCTCAACTCTTGGCTTGTTTTGAACCTGAGAAGGCCTTAGATCCAAGCCATTAGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGGTCTCTTATATTATAGACATCTT 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTAGAGTGATTGATCTATTAAACGGATCAAGAACGTCTCCAACAACTCTGCTTACTATAA 769
                                                                                                                                                                                                                                                                                                                                                   TCCTATCACTCTTCCCACAACAAGTGGTTCCATGA 37
                                                                                                                                                                                                                                                                                                                                                                         TCCAACAACTCTGCTTACTATAAGAGGGTCTCTTA 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCATCTTAGTTGGTGGAGTGAAGAATCAAGAACATCTCCTACCACTCTCCCCCATTATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         La Rosa, Ti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/09878574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 74.2; DB 10
Pred. No. 3.7e-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Other Molecules Associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
                                                                                                                                                                      and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          686
                                                                                                                                                                                                                                                                                                                                                                                                                            72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                  US-09-764-847-380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-092-154-380
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-764-847-380/c
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 380, Application US/09764847 Patent No. US20020132767A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn SEQ ID NO 380
   Matches
                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Nucleic Acids, Proteins, FILE REFERENCE: PC009
CURRENT APPLICATION NUMBER: US/09/764,847
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                    COMMERCE SECONDANCE: 2001-01-17

Prior application data removed - consult PALM or NUMBER OF SEQ ID NOS: 2003
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Rosen et al.
                                                                           NAME/KEY: SITE
LOCATION: (503
                                                                                                                                                                                                                                                                        TYPE: DNA
                                                               OTHER INFORMATION: n
                                                                                                   OTHER INFORMATION: n
                                                                                                                        NAME/KEY: SITE
                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                  NAME/KEY: SITE LOCATION: (54)
                                                                                                                                                                         LOCATION: (29)
OTHER INFORMATION:
                                                                                                                                                                                                            LOCATION: (20)
OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                    NAME/KEY: SITE
                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature LOCATION: (503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (54)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (29)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                   LENGTH: 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
                                                                                                               LOCATION: (502)
                                                                                                                                                                                                  NAME/KEY: SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 847 TAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85
                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
nes 57; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGTTCTAGA 76
  l Similarity
57; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                           (503)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (502)
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                            Ver.
                                                                                                                                    Þ
                                                                                                                                                                           =
            5.7%;
                                                               equals a,t,g,
                                                                                                 equals
                                                                                                                                     equals
                                                                                                                                                                         equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.7%;
81.4%;
                                                                                                 a,t,g,
                                                                                                                                     a,t,g,
                                                                                                                                                                         a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a,t,g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a,t,g,
   0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
              Score 49.2;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 49.2; DB Pred. No. 0.01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
Mismatches
                                                                ç
                                                                                                 ٥ŗ
                                                                                                                                                                           Ċ,
                                                                                                                                                                                                             얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Or.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Or.
                                                                                                                                       ٥ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ç
              0.01;
                           DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DВ
                                                                                                                                                                                                                                                                                                                                                                                      and Antibodies
   13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                     file wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 503;
   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
  Gaps
```

0;

QΥ

787 ATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGGATCCAC 846

```
RESULT 10
US-10-074-095-248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 248, Applic Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/074,095 CURRENT FILING DATE: 2002-02-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Rosen et al TITLE OF INVENTION: Nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              145
                                                                                                                                                                                                                                                                                                                                                                                                                      OR APPLICATION NUMBER: 60/216,880
OR FILING DATE: 2000-07-07
OR FILING DATE: 2000-08-14
OR APPLICATION NUMBER: 60/251,869
OR APPLICATION NUMBER: 60/235,834
OR APPLICATION NUMBER: 60/235,834
OR FILING DATE: 2000-12-08
OR FILING DATE: 2000-9-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DR APPLICATION NUMBER: 60/217,496
DR FILLING DATE: 2000-07-11
DR APPLICATION NUMBER: 60/225,447
DR FILLING DATE: 2000-08-14
DR APPLICATION NUMBER: 60/218,290
DR FILLING DATE: 2000-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R APPLICATION NUMBER: 6
R FILING DATE: 2000-07-
R APPLICATION NUMBER: 6
R FILING DATE: 2000-08-
R APPLICATION NUMBER: 6
R APPLICATION NUMBER: 6
R FILING DATE: 2000-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE: PC008C1
                                                                                                                                                            APPLICATION NUMBER: 60/224,519 FILING DATE: 2000-08-14
                                                                                                                                                                                                        APPLICATION NUMBER: 60/236,369 FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/234,274 FILING DATE: 2000-09-21 APPLICATION NUMBER: 60/234,223 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/216,647 FILING DATE: 2000-07-07 APPLICATION NUMBER: 60/225,267 FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 2000-07-14
APPLICATION NUMBER: 60/225,757
FILING DATE: 2000-08-14
APPLICATION NUMBER: 60/226,868
FILING DATE: 2000-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/180,628 FILING DATE: 2000-02-04 APPLICATION NUMBER: 60/214,886 FILING DATE: 2000-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 09/764,860 FILING DATE: 2001-01-17 APPLICATION NUMBER: 60/179,065 FILING DATE: 2000-01-31
      FILING DATE: APPLICATION |
                         APPLICATION NUMBER: 60/249,299 FILING DATE: 2000-11-17
                                                                      APPLICATION NUMBER: 60/241,809 FILING DATE: 2000-10-20
                                                                                                               APPLICATION NUMBER: 60/220,964 FILING DATE: 2000-07-26
                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/
FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 2000-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAGTTCTAGA 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAACCCCATAAAAATTAAATAAAACTCGTGCCGAATTCCTGCAGCCCGGGGGATCCAC 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/10074095
b. US20030077704A1
                                                                                                                                                                                                                                                                                              2000-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-08-14
                                                                                                                                                                                                                                                                                                                  60/228,924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/225,758
                                                                                                                                                                                                                                                                       60/224,518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/220,963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/217,487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OR FILING DATE: 2000-09-29
OR APPLICATION NUMBER: 60/236,802
OR FILING DATE: 2000-10-02
OR FILING DATE: 2000-10-02
OR FILING DATE: 2000-10-02
OR APPLICATION NUMBER: 60/237,040
OR FILING DATE: 2000-10-02
OR APPLICATION NUMBER: 60/237,040
OR APPLICATION NUMBER: 60/240,960
                                                                                                                                                                        OR FILING DATE: 2000-11-17
OR APPLICATION NUMBER: 60/249,210
OR FILING DATE: 2000-11-17
OR APPLICATION NUMBER: 60/226,681
OR FILING DATE: 2000-08-22
OR APPLICATION NUMBER: 60/225,759
OR APPLICATION NUMBER: 60/225,213
OR APPLICATION NUMBER: 60/225,213
OR APPLICATION NUMBER: 60/225,213
OR APPLICATION NUMBER: 60/225,213
R APPLICATION NO
R FILING DATE: 2
R APPLICATION NO
R FILING DATE: 2
                                                                                    FILING DATE: 2000-08-22
APPLICATION NUMBER: 60/
FILING DATE: 2000-08-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/239,937
FILING DATE: 2000-10-13
APPLICATION NUMBER: 60/241,787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 2000-09-08
APPLICATION NUMBER: 60/229,509
FILING DATE: 2000-09-05
APPLICATION NUMBER: 60/236,367
FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 2000-09-08
APPLICATION NUMBER: 60/2
APPLICATION 2000-09-08
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/249,216
                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-11-08
APPLICATION NUMBER: 60/246,532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 2000-10-20 APPLICATION NUMBER: 60/246,474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/239,935 FILING DATE: 2000-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/237,039
FILING DATE: 2000-10-02
APPLICATION NUMBER: 60/237,038
                                                                                                                                                          APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 2000-09-01
APPLICATION NUMBER: 60/
FILING DATE: 2000-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 2000-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/
FILING DATE: 2000-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/236,370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/229,513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/229,345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/251,868 FILING DATE: 2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/251,856 FILING DATE: 2000-12-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2000-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60 FILING DATE: 2000-08-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60, FILING DATE: 2000-11-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/241,785 FILING DATE: 2000-10-20
    NUMBER: 60/230,438: 2000-09-06
                                             NUMBER: 60/
: 2000-09-27
                                                                                                                                                        NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-10-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-10-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-09-
                                                                                                                                                      60/227,182
                                                                 60/235,836
                                                                                                             60/225,214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/231,413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/229,287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/229,343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/234,997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/229,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/236,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/225,268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/244,617
```

FILING DATE:

FILING DATE:

APPLICATION NUMBER: 60/249,212

APPLICATION NUMBER: 60/249,213 FILING DATE: 2000-11-17 APPLICATION NUMBER: 60/249,208 APPLICATION NUMBER: APPLICATION NUMBER:

60/249,218

2000-11-

2000-08-14 2000-06-30

60/225,266

```
δÃ
                            밁
                                                     QΥ
                                                                                                     Query Match
Best Local :
                                                                                        Matches
840 GATCCACTAGTTCTAGA 856
                               229
                                                       780 TATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGG 839
                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 2000-10-20
                                                                                                                                                                FILING DATE: 2000-11-08
APPLICATION NUMBER: 60/231,243
                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                              FILING DATE: 2000-10-20
                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                       FILING DATE: 2000-10-
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/231,414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/249,264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/249,215 FILING DATE: 2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/249,211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/249,217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/249,244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/249,245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/232,400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                            TGTGTTCATAAAAGATATTGGTCTGTAGTTTTCCTCGTGCCGAATTCCTGCAGCCCGGGG 288
                                                                                        . Similarity
59; Conserv
                                                                                                                                                                                                                                                                                                       2000-10-20
                                                                                                                                                                                                                                                                                                                                   2000-09-14
                                                                                                                                                                                                                                                                                                                                                                  2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                            2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                              2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-09-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-11-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-11-
                                                                                                                                                   2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-09-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-11-
                                                                                                     5.6%;
76.6%;
                                                                                                                                                                                                                            60/241,221
                                                                                                                                                                                                                                                          60/241,786
                                                                                                                                                                                                                                                                                                                    60/241,808
                                                                                                                                                                                                                                                                                                                                               60/232,401
                                                                                                                                                                                                                                                                                                                                                                                                                                         60/233,063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/232,080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/232,081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/249,297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/249,214
                                                                                                                                                                                              60/246,475
                                                                                                                                                                                                                                                                                     60/241,826
                                                                                                                                                                                                                                                                                                                                                                              60/232,399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/233,064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/231,244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/231,242
                                                                                                                                                                                                                                                                                                                                                                                                           60/232,397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/249,207
                                                                                     Score 48.2; DB
Pred. No. 0.016;
); Mismatches
                                                                                       18;
                                                                                                                  9;
                                                                                                                   Length 367;
                                                                                       Indels
                                                                                     0;
                                                                                    Gaps
                                                                                     0;
```

60;

Conservative

0,

Indels

0;

Gaps

Ö

```
RESULT 12
US-09-925-300-816/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; FEATURE:
, NAME/KEY: SITE
; LOCATION: (345)
; OTHER INFORMATION: n equals a,t,g, or c
US-09-764-860-248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-09-764-860-248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db.
                                                                      ; OTHER INFORMATION: n equals US-09-925-300-816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; SOFTWARE: PatentIn Ver. 2; SEQ ID NO 248; LENGTH: 367; TYPE: DNA; ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: ROSEN et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PC008
CURRENT APPLICATION NUMBER: US/09/764,860
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 816, Application US/09925300 Patent No. US20020151681A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 248, Application US/09764860 Patent No. US20020094953A1
                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                   FEATURE:

NAME/KEY: misc feature

LOCATION: (2)

OTHER INFORMATION: n equals a.

NAME/KEY: misc feature

LOCATION: (15)
                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/925,300 CURRENT FILING DATE: 2001-08-10 PRIOR APPLICATION NUMBER: PCT/US00/05988 PRIOR FILING DATE: 2000-03-08
                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/124,270 PRIOR FILING DATE: 1999-03-12 NUMBER OF SEQ ID NOS: 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Craig Rosen, APPLICANT: Steve Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 1198
                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: PA101
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Steve Ruben
TITLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
                                                                                                                                                                                                              TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                   LENGTH: 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840 GATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              289 GATCCACTAGTTCTAGA 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780 TATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 59; Conserv
                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.6%;
76.6%;
                5.6%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          305
                                                                                    a,t,g,
                                                                                                                                          a,t,g,
Score 48; DB 10; I Pred. No. 0.022; 0; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 48.2; DB Pred. No. 0.016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                        or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18;
                                 Length 551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

0;

밁

777 145

TCCCAAAGCTATAGACGTCAGCCTTCTGCATGCCTGCTCGTGCCGAATTCCTGCAGCCCG

836

TCTTATATTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCG

õ

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Homo sapiens
US:09-764-868-303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-925-297-400/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-764-868-303/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 303
LENGTH: 2585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. US2002016 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 400
LENGTH: 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 400, Application US/09925297 Patent No. US20020081659A1
     Matches
                 Best Local
                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 303, Application US/09764868 Patent No. US20020168711A1
                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/925,297
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR FILING DATE: 2000-03-08
PRIOR APPLICATION NUMBER: 60/124,270
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/764,868
CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins,
FILE REFERENCE: PTZ32
                                                                                                                                           LOCATION: (7)

OTHER INFORMATION: n equals

NAME/KEY: misc feature

TOCATION: (10)

TOCATION: (10)

TOCATION: (10)

TOCATION: (10)

TOCATION: (10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prior application data removed - refer to PALM NUMBER OF SEQ ID NOS: 1510
                                                                                                       NAME/KEY: misc feature LOCATION: (14)
                                                                                                                                         LOCATION: (10)
OTHER INFORMATION: n equals a,t,g,
                                                                                                                                                                                                                         FEATURE:
NAME/KEY: misc feature
                                                                                     OTHER INFORMATION: n equals a,t,g, or
                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          806 AACAAACCTCGTGCTGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60 AAAAAACCTCGTGCCGAATTCCTGCAGCCCGGGGGATCCACTAGTTCTAGA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGATCCACTAGTTCTAGA 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 Similarity
49; Conser
                   Similarity
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                   5.6%;
75.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.6%;
96.1%;
                                                                                                                                                                                         a,t;g,
   0
Score 47.6; DB 10;
Pred. No. 0.028;
0; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 47.8;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                         유
                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or file wrapper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 2585;
   Indels
                                 Length 560;
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

0,

```
δÃ
                                                                                                                                   Ş
Search completed: May Job time: 159.5 secs
                                                      밁
                                                                                                            밁
                                                                                                                                                                                                                     US-09-764-891-404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-764-891-404/c
                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 404
LENGTH: 631
                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 404,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 10231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Nucleic Acids, Proteins, FILE REFERENCE: PC006 CURRENT APPLICATION NUMBER: US/09/764,891 CURRENT FILING DATE: 2001-01-17
                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Rosen et al.
                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                 NAME/KEY: SITE LOCATION: (28)
                                                                                                                                                                                                                                                                                                                  LOCATION: (19)
OTHER INFORMATION: n equals a,t,g, or c
                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: SITE
                                                                                                                                                                                                                                                                            OTHER INFORMATION:
                                                                                                                                                                                                                                                                                        NAME/KEY: SITE LOCATION: (27)
                                                                               855 GA 856
                                                                                                       839 GGATCCACTAGTTCTAGA 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141 TGATGTTTCCAGATTGAACTTTTCCTCCGGATTCCTCGTGCCGAATTCCTGCAGCCCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             779 TTATATTTATAGACATCTTTGATCTTGAACAAACCTCGTGCTGAATTCCTGCAGCCCGGG
                                                      67
                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGATCCACTAGTTCTAGA 64
                                                      66
                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09764891
o. US20030077808A1
                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                            5
           1,
                                                                                                                                                                              5.6%;
85.5%;
                                                                                                                                                                                                                                  equals a,t,g,
                                                                                                                                                                                                                                                                           equals a,t,g,
              2003, 23:35:13
                                                                                                                                                                 0;
                                                                                                                                                                             Score 47.6; DB Pred. No. 0.029;
                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                     ٥ŗ
                                                                                                                                                                                                                                                                              ი
                                                                                                                                                                                          DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and Antibodies
                                                                                                                                                                                          Length 631;
                                                                                                                                                                Indels
                                                                                                                                                                0
                                                                                                                                                          Gaps.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            838
```